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A NEW SYSTEM

OF THE

NATURAL HISTORY



QUADRUPEDS, FISHES, —AND
BIRDS, INSECTS.

IN THREE VOLUMES.

Beasts wild and tame, the birds that fly,
And fish that cleave the floods. MILTON.

VOL. FIRST.

EDINBURGH:

PRINTED FOR *PETER HILL*, EDINBURGH;
and
THOMAS CADELL, LONDON.

MDCCXCI.

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A NEW SYSTEM

OF THE

NATURAL HISTORY

OF

QUADRUPEDS.

Mites feræque beſtiæ.

BUCHANAN.

EDINBURGH:

PRINTED FOR *PETER HILL*, EDINBURGH;
and
THOMAS CADELL, LONDON.

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PREFACE.

NATURAL HISTORY is a ſcience both uſeful and entertaining: as it comprehends animals, vegetables, and foſſils; air, earth, and ſea, with all their inhabitants and productions; it may be ſaid to include the knowledge of all nature, and to preſent an inexhauſtible fund of inquiry and of amuſement. It is intimately connected with all the other ſciences; and with all the arts, from the ſimpleſt and rudeſt, to the moſt complicated and the moſt elegant. While we look around us, we cannot avoid becoming more or leſs acquainted with the manners of animals, the œconomy of vegetables, and the general appearances of nature. From an acquaintance with theſe, many advantages

have already accrued to man; and from a more intimate knowledge of them, many more may ſtill be derived. The comfort and happineſs of all ranks may, in ſome degree, be ſaid to depend on the knowledge of natural hiſtory. The huſbandman needs to know the characters of the tame animals which he employs; what advantages are to be derived from them; whether there are others that would ſuit his purpoſe better; where they are to be found; how they may be procured, and how ſupported; the qualities of the ſoil which he cultivates, and the means of managing and of improving it; the nature of the grain which he raiſes; and whether he might not, with advantage, ſubſtitute a different ſpecies, inſtead of that which hath been in common uſe. Even the meaneſt mechanic muſt have a pretty accurate knowledge of many of the qualities of thoſe natural objects with which his art is connected. The fine arts, though uſually conſidered as the peculiar province of imagination, depend greatly upon natural hiſtory. Both in muſic and painting, the ſtudy of nature alone can enſure ſucceſs. In the writings of the poets, many images are introduced from external nature; and alluſions are frequently made

to

to the manners and œconomy of animals. Many of the transformations, celebrated by Ovid, are founded on facts in the natural hiſtory of animals and vegetables. Virgil alſo, in his Georgics, deſcribes the œconomy of ſome of the tame animals, and of ſome parts of the vegetable kingdom. Such parts are not the leaſt valuable of their writings. As modern poets have not the ſame machinery of gods and goddeſſes; of nymphs, fawns, and ſatyrs, which were ſo ſerviceable to the heathen poets of antiquity; as they cannot employ elves, witches, ghoſts, or the wonders of enchantment, with ſo much advantage as the writers of the old romances; let them therefore be more induſtrious in ſtudying the ſcenes of Nature: Theſe are ſo endleſsly diverſified, that they muſt always continue to afford abundance of the richeſt materials for the poet's art;—materials, which have this advantage over allegory and fiction, that they are durable as the preſent conſtitution of things. By attending to this principle, Thomſon, while he led the way to others, procured for himſelf a diſtinguiſhed place among thoſe whoſe names are immortal.

From the viciſſitudes of the ſeaſons acting upon their ſenſes; from the preſence of ſurrounding objects; from the neceſſity of deriving from theſe, food, cloathing, and ſhelter, Natural Hiſtory muſt have been an object of the firſt importance to man, and attended to from the earlieſt periods of ſociety. But before the invention of letters, or even ſubſequent to that period, when the art of writing was far from being common, the obſervations and the diſcoveries of individuals were neither likely to be communicated to thoſe at a diſtance, nor recorded for the information of thoſe that ſhould come after. In a more poliſhed ſtate of ſociety, the caſe is widely different. Accordingly we find that Alexander the Great cauſed a collection of animals to be made for the examination of his maſter, Ariſtotle; and that wild-beaſts, from every quarter of the globe, then diſcovered, were exhibited in the amphitheatres at Rome; yet Ariſtotle is the only ancient writer on zoology that merits attention: Pliny and Ælian, with his great example before their eyes, produced nothing but crude collections, without much taſte or judgement, blending truth and falſehood in one common maſs. For many ſucceeding ages, from va-

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rious well known cauſes, all in Europe was ignorance, wonder, and credulity.

THOUGH Natural Hiſtory was not one of the favourite ſtudies of the revivers of literature; yet the ſcholars of that period diſplayed a degree of induſtry, which, to many of the triflers of the preſent day, may well appear incredible. The voluminous labours of Geſner and Aldrovandus are an illuſtrious inſtance. Theſe are rude quarries from which ſome valuable materials may be dug by ſuch as will undergo the fatigue, and poſſeſs the judgement neceſſary to turn them to a good account.

TOWARDS the end of the laſt century, this ſcience began to be more generally cultivated. Among our countrymen, Ray, Woodward, Collinſon, and Edwards, proſecuted this ſtudy with ſingular ſucceſs, and have been followed in the ſame tract by many others, ſcarcely inferior in induſtry or abilities; none of whom has been more ſucceſsful than the indefatigable Pennant. But to the celebrated Linnæus of Sweden, is juſtly attributed the honour of having firſt formed Natural Hiſtory into a ſyſtem. He may therefore perhaps be reckoned

oned its greateſt benefactor. The eloquent Buffon, by ſo happily uniting extenſive knowledge, ingenuity, and elegance, hath contributed, in a ſignal manner, to diffuſe, among all the various ranks in ſociety, an ardent deſire to obtain a more intimate acquaintance with this ſcience. The philoſophy of Natural Hiſtory, a work but lately publiſhed by the judicious Tranſlator of Buffon, will alſo, it is hoped, contribute conſiderably to its being better underſtood.

A SCIENCE, when taken in its full extent, ſo intimately connected with all the neceſſary and the fine arts, forming the baſis of the other ſciences, and more uſeful than any of them for the ordinary purpoſes of life, can never be too generally, or too induſtriouſly cultivated. It is with the utmoſt propriety therefore that books on natural hiſtory are put into the hands of the young. If ſuch books can be rendered intereſting, they muſt be uſeful. Suppoſing animated nature the moſt engaging part of the ſtudy of natural hiſtory for the earlier part of life; leaving the examination of vegetables and of foſſils to the Botaniſt and the Chemiſt; we have endeavoured to recommend this branch,

branch, more effectually than it has yet been, to general attention, by ſelecting, as the ſubjects of hiſtorical deſcription, ſuch animals as, either from their holding a more eminent rank among the brute creation, from their being particularly ſerviceable to man, or from other circumſtances influencing their character, are more worthy of notice, and moſt likely to intereſt the obſerver; proceeding with theſe in a regular and ſyſtematic order; giving the names which they have received from the moſt reſpectable ſyſtematic writers on natural hiſtory, in their ſyſtems of claſſification, and explaining their characters with as much ſimplicity and elegance of expreſſion, and as much certainty of information, as we could poſſibly attain. Theſe were indeed the views with which the preſent work was undertaken. How far the execution may merit the approbation of the public, we leave to the candid and judicious to decide. In forming deſigns, the General, the Stateſman, the Author, the Artiſt of whatever denomination, are apt to rely too much on their own powers, and on the concurrence of favourable circumſtances. That which diſplayed elegance and ſplendour, when it exiſted only in idea, be-

comes often mean and uncouth, when brought into real exiſtence. On the preſent occaſion, however, pains have not been ſpared. The arrangement of Pennant, improved from Ray, is nearly followed, as appearing liable to fewer objections than any other with which we are acquainted. Though we enter, in a particular manner, into the hiſtory of none but the more remarkable animals; yet all the known ſpecies belonging to the different ORDERS or GENERA are enumerated. From the conciſeneſs neceſſary to bring ſo much matter into ſuch narrow bounds, the book may not appear to poſſeſs ſo much elegance and eaſe as we could have wiſhed; but we flatter ourſelves that it will be found to be perſpicuous, and to convey more information, that may be depended on, than any other work of the ſame ſize and price. A deſire to render it worthy of general approbation, and ſome other circumſtances, the knowledge of which could not benefit the public, have retarded the publication of this work longer than was either wiſhed or expected; but the indulgence of the public, it is hoped, will excuſe a delay which was not foreſeen, and by no means the effect of deſign.

NATURAL HISTORY

OF

ANIMALS.

Of Animals in general.

AMONG the ſeveral orders of beings in that part of the univerſe which is ſubject to human obſervation, animals are certainly the moſt remarkable and the moſt eminent. The variety of the parts of an animal body, the happy perfection of the ſtructure in which theſe are united, the diverſity of forms which this order of beings exhibits, the powers of feeling, motion and action, with which they are endowed, and indeed all their qualities, and all the circumſtances of their exiſtence,—concur to eſtabliſh them in this illuſtrious rank among the works of creation. The mineral kingdom preſents many beauties and many wonders to our obſervation: the vegetable world, as it diſplays organization and a ſpecies of life; as the individuals belonging to it increaſe in ſize by growth, which enlarges all their parts in due proportion, not by the ſimple accumulation of homogeneous matter; and as it exhibits ſuch a multiplicity of beautiful forms, and ſuch variety, richneſs and elegance of colouring; is to be

conſidered as ſuperior to brute matter, and approaches nearly to the dignity of the animal creation. But ſtill, when from the contemplation of theſe two kingdoms of Nature we raiſe our views to Animals, a train of nobler objects appear before us; our curioſity is more powerfully excited; our attention more cloſely fixed; and our minds are elevated and enlightened by a ſet of new and grander ideas.

He who views Nature with a careleſs eye, readily diſtinguiſhes the animal from the vegetable, and the vegetable from the mineral kingdom: He notices not the nice gradations by which theſe different orders of beings run, as it were, into one another; he marks only the more prominent features, and the more glaring colours: the remarkable differences force themſelves upon his obſervation; but he paſſes on too rapidly to diſcern, or even examine whether theſe are ſeeming or real,—whether they are divided by a firm and inſuperable barrier, or connected by intermediate links. It never occurs to the vulgar, that animals and vegetables may poſſibly be one order of beings, or that any of the vegetable tribes are nearly allied to ſome parts of the mineral world: They would laugh to hear a philoſopher declare himſelf at a loſs to give ſuch a definition of any one of theſe orders as might abſolutely exclude the others.

Yet, philoſophers have actually felt this difficulty. When they find animals fixed to a particular ſpot, extremely imperfect in their powers of ſenſation, and diſplaying ſcarce any inſtincts or diſpoſitions of mind, they can hardly conſider them as endowed with any principle ſuperior in its nature to vegetative life. Again, when they obſerve plants unfolding to the rays of the ſun their leaves or flowers, which ſhrink together at the fall of night,—receding, as if afraid of injury, from approaching

ing objects,—and, in whatever ſituation the ſeed be ſown, or the ſhoot planted, conſtantly growing in that direction in which they can beſt enjoy the influence of light and air; it appears almoſt unfair to deny this claſs of beings ſenſations, deſires, and even deſign. The ſenſibility of the *mimoſa*, the art of the *dionæa muſcipula*, the affectionate care with which the leaves of the tamarind tree contract and wrap themſelves round the tender fruit, to protect it from the nocturnal cold, are ſo many inſtances in which vegetables appear to poſſeſs ſome of the moſt eminent of the characteriſtics of animals. The oyſter and other ſhell fiſhes, with ſeveral different ſpecies always ranked in the animal kingdom, ſeem, again, to poſſeſs few of the privileges of animals.

The *analogies* between animals and vegetables, which have been traced by philoſophical obſervation, occaſion other difficulties in the attempt to fix the boundary between theſe two kingdoms. The bodies, as well of plants as of animals, conſiſt of fluids and ſolids; they have both veſſels deſigned to contain the fluids, and glands to ſecrete different juices: while the blood circulates through the bodies of animals, the ſap of vegetables aſcends and deſcends, not in the ſame veſſels indeed, but ſo as to produce the ſame effects on the vegetable, which the motion of the blood by the force of the heart and the arteries, produces on an animal body. Theſe are but a few of the reſemblances which have been obſerved between the ſpecies of the animal and thoſe of the vegetable kingdom. Almoſt every one of the parts common to animal bodies has been repreſented by one naturaliſt or another as matched by ſome correſpondent part in vegetable bodies. Such analogies are ſometimes plain and ſtriking, and ſometimes ſcarce perceptible, or merely imaginary. They afford an agreeable ſubject of ſpeculation; and it cannot

be denied that they increaſe the difficulty of aſcertaining the limits by which theſe two departments of Nature are divided.

But, however numerous and ſtrong the analogies between animals and vegetables, however difficult it may be to diſcern the preciſe line which ſeparates the one kingdom from the other; yet the leading characteriſtics are ſufficiently diſtinct. The privileges which animals enjoy above the other parts of the creation are in moſt inſtances highly conſpicuous.

One of the moſt eminent of theſe privileges is their power of *loco-motion*. Klein, with ſufficient propriety, aſſumes this as the great characteriſtic by which animals may be diſtinguiſhed from the other orders of beings. Inanimate bodies never change their ſituation unleſs acted upon by ſome external impulſe. Vegetables ſeem to enjoy a ſpecies of life, and diſplay on many occaſions a degree of ſenſibility, or at leaſt ſomething very like it; but they are fixed, each to a peculiar ſpot, where they ſpring up, expand into full growth, and at length wither and decay. Animals, without ſuffering any external impulſe, readily move from place to place, by virtue of an inward principle, ſuperior in its nature to vegetative life. Some animals enjoy this power or property in a more eminent degree than others; ſome are more diſpoſed than the reſt of their fellows to exert it; and ſome, again, poſſeſs the power in a very inferior degree, and diſcover but a very faint inclination to avail themſelves of it. We admire the rapid flight of the eagle, and the ſwiftneſs of the horſe and the greyhound; we obſerve ſome of the ſwifteſt and moſt vigorous animals to ſink into lethargic indolence, till rouſed by ſome peculiarly powerful motive; the ſnail, the ſloth, but more particularly the oyſter, the limpet, and other ſhell-

fiſhes,

fiſhes, both in their powers of ſelf-motion, and in their diſpoſitions to exert theſe, riſe but very little above thoſe vegetables which are more remarkable for ſenſibility. This property, however, though not uniformly the ſame in all animals, ſeems to belong, in one degree or another, to every being that can be ranked in this claſs; and it is ſufficient to diſtinguiſh them remarkably, in all the circumſtances of their exiſtence, from thoſe from whom Nature has withheld it.

But this is not the only property on which the dignity of the *animal* character depends. To be capable merely of moving from one ſituation to another by virtue of their natural powers, would not greatly exalt this order of beings:—united with other correſpondent faculties, this power becomes important. A mineral or vegetable body, with ſelf-motion ſuperadded to its other properties, would not be much ſuperior in dignity to what it naturally is, without any ſuch addition. *Senſibility* is another characteriſtic of animals: it is intimately connected with their powers of loco-motion, and even neceſſary to prompt them to the exertion of thoſe powers. Did I not feel, I ſhould never be rouſed to action. Several vegetables, among which the *mimoſa* or ſenſitive plant is the moſt remarkable inſtance, appear to poſſeſs ſomething like ſenſibility. It is ſcarce poſſible to determine upon what principle in their nature the emotions which this ſpecies of plants diſplay on certain occaſions, may depend. Is it owing to ſomething peculiar in the ſtructure of their parts, or in the matter of which they are formed? or are they actually informed by a ſentient principle? This is perhaps one of thoſe intricate caſes in which truth is removed from our view, even beyond the reach of experiment. Yet, if we may fairly venture on this occaſion to reaſon from analogy, we muſt conclude

conclude that thoſe plants are equally deſtitute of a conſcious, ſentient principle with the other ſpecies of the vegetable kingdom. The ſtructure of their parts is not that of an animal, but of a vegetable body: They are, like other vegetables, fixed to a particular ſpot: in all their other characteriſtics too, they reſemble not animals but vegetables; and even thoſe phœnomena, in which it may be imagined that they diſplay indications of ſenſibility, are of ſuch a nature that no deciſive inference can be deduced from them. Animals are endowed with various organs and powers of ſenſation, which ſerve to make them acquainted with the different properties of ſurrounding objects. Moſt of them ſee, hear, taſte, touch and ſmell. They all poſſeſs theſe, or a part of theſe powers of ſenſation, in an unequivocal manner. The ſenſes are not indeed equally perfect in all; and ſome ſpecies appear to enjoy only a part of them. In ſome animals, the ſight, the hearing, the touch, the taſte, or the ſmell, is remarkably dull; and in others, exquiſitely delicate and acute. The eye of the mole receives but a faint glimmer of light; the ear of the aſs is inſenſible to the harmony or melody of ſounds; the ſight of the ounce, again, is wonderfully acute; and the touch of the ſpider exquiſitely delicate. Poſſibly the ſame feelings may not communicate to all animals the ſame images and ſentiments: What is ſweet to one animal may perhaps be bitter to another; what is beautiful to one ſpecies, may appear to another ugly or diſagreeable: an odour, which to this animal is ſweet-ſmelling, may be a ſtench in the noſtrils of that. All ſenſations, however, communicate to the animal ſome uſeful knowledge of the qualities of ſurrounding objects; ſome knowledge ſuitable to his character and his circumſtances.

But

But ſenſibility requires the beings to whom it belongs to poſſeſs ſome *ſuperior* powers. Organs of ſenſation ſerve merely to carry on an intercourſe between ſome internal principles in the animal poſſeſſed of them, and external nature. Theſe internal principles exalt animals highly above every other order of beings; and are, beſides, ſo much diverſified in different ſpecies of animals, and in different individuals, as to create the moſt remarkable diſtinctions that appear among them. Perception muſt be common to all animals; without it, organs of ſenſation would be uſeleſs: Perception is indeed ſcarce any thing elſe but another word for ſenſibility: the only difference ſeems to be, that the former is ſcarce ſo ſtrongly expreſſive a term as the latter. Memory appears to be no leſs neceſſary to animals than perception; to receive impreſſions from external nature, would be but a trifling privilege, were thoſe impreſſions of ſo evaneſcent a nature as to be effaced the next moment after they were communicated. Animals, without this power, could perform no voluntary functions. To render them equal to theſe, it ſeems indiſpenſibly neceſſary that they be able to connect the paſt with the preſent. Accordingly, every animal whoſe manners and œconomy have been obſerved with any conſiderable degree of attention, appears to be more or leſs capable of remembrance. The docility of the domeſtic animals is a ſufficient proof that they are endowed with this faculty: The cunning, and even the ferocity of the beaſts of prey, prove the ſame fact with reſpect to *them*: The complex and wonderful œconomy of the bee, the beaver, the crow, the birds of paſſage in general, and various others of the inferior animals, whoſe manners have been often contemplated with admiration, ſhews that their retentive powers are remarkably tenacious of the impreſſions made upon them.

The

The human ſpecies poſſeſs the faculty of memory in a very eminent degree; and the arts by which they have learned to improve and aſſiſt it, render it a more important feature in their character, than in that of any of the other ſpecies in the animal creation. But, we cannot conceive a being to poſſeſs the powers of perception and memory, yet not be conſcious of its exiſtence: This Conſciouſneſs muſt therefore be allowed to be another of the internal powers of animals. With the powers of perception, remembrance, and conſciouſneſs, animals are obſerved to be alſo endowed with certain affections, and to be ſuſceptible of certain emotions. Joy, grief, love, hatred, gratitude, reſentment, fear, courage, with a number of other ſimilar principles, reſide in the human breaſt, and are to man the great ſprings of action. The inferior animals too, appear to be ſuſceptible of the ſame emotions, and capable of many both of the ſelfiſh and the ſocial affections which diſtinguiſh the human character. But neither do all the individuals of any one ſpecies poſſeſs all theſe affections and paſſions in the very ſame degree; nor are the diſpoſitions and affections of the different ſpecies nearly the ſame. One ſpecies is ferocious and cunning; in another courage appears united with noble generoſity: One is remarkable for ſloth and liſtleſs inactivity; another is reſtleſsly active: One is grateful, ſubmiſſive and affectionate; another of a froward, untameable ſpirit, inſenſible to kindneſs, and incapable of attachment: One is docile and intelligent; another dull and ſtupid. Beſides theſe emotions, affections, and paſſions of a more generous and refined nature, animals are likewiſe ſubject to certain appetites and feelings of a different kind: Such are the appetites for food, and for the procreation of the ſpecies; the ſenſe of bodily pleaſure, and of bodily pain. Theſe are more uniformly common to

animals

animals in general than the former: To receive the requiſite ſupplies of food, and to re-produce the ſpecies, are properties ſtill more eſſential to the animal character than the more refined ſentiments and affections.

The internal qualities which have been enumerated, are generally allowed to be common to all animals, although diverſified in different ſpecies, and different individuals. But theſe,—the power of ſelf motion, organs of ſenſation, perception, conſciouſneſs, memory, appetites, affections and paſſions,—are not ſufficient to complete the character: They need ſome other principles, to call forth, to regulate, and to reſtrain their energy; ſomething on which they may act, and which may connect them, as it were, with one another. Animals are actually endowed with other internal principles beſides theſe: They compare objects preſented to them; they judge between true and falſe; they diſtinguiſh between beauty and deformity; they can diſcern order from confuſion. Their other powers furniſh, as it were, the materials; theſe combine and ſeparate, and arrange them. The operation of theſe ſeveral principles is ſucceeded by the determination of the will; a power which is neceſſary to complete the character of a thinking, animated being. No circumſtances in the ſituation of animals, no particulars in their form, or bodily powers, or mental diſpoſitions, give riſe to more remarkable diſparities among them, than thoſe which depend on their powers of comparing, and of judging between different objects. Theſe hold ſo important a rank among their other powers, that, wherever they are in the ſmalleſt degree diverſified, they muſt produce the moſt remarkable diverſities of character.

By their ſuperiority in theſe powers, the human ſpecies are eminently diſtinguiſhed above the reſt of the ani-

mal kingdom; ſo eminently, indeed, that they are lords of animated nature,—the reſt, their ſlaves, or unequal enemies. The ſame law prevails throughout all animated nature. The more perfect theſe powers of comparing and judging in any particular ſpecies, ſo much the more powerful, reſpectable, and happy is that ſpecies. Superior addreſs often renders a ſmaller and more timid animal an over-match for one that is larger, ſtronger, and even more ferocious.

But the inferior animals are ſo remarkably deficient in the reaſoning and thinking powers, when compared with man, that human pride has been tempted to deny them entirely the poſſeſſion of ſuch powers. Though we find them ſuch uſeful aſſiſtants, and at times ſuch formidable enemies, we would willingly degrade them to a rank in the order of creation ſtill lower than that which nature has aſſigned them. We delight to repreſent them as deſtitute of reaſon, and guided only by what we call inſtinct. We obſerve that even the moſt ſagacious among them are incapable of that variety of minute diſtinctions, which our reaſoning faculties enable us to make:—They cannot take ſo full a review of the paſt, nor look forward with ſo penetrating an eye towards the future: They do not accumulate obſervation upon obſervation, or add to the experience of one generation that of another: Their manners do not vary, nor their cuſtoms fluctuate, like ours: Their arts remain always the ſame, and are not liable either to degenerate, or to be improved: The crow always builds its neſt in the ſame way; every hen treats her young with the ſame meaſure of affection; even the dog, the horſe, and the ſagacious elephant, ſeem to act rather mechanically than with deſign. From ſuch haſty obſervations as theſe it has been inferred, that the brutes are directed in their actions by ſome myſterious influence, which

which impels them to employ their powers unintentionally in performing actions beneficial to themſelves, and ſuitable to their nature and circumſtances.

Other opinions have, however, been formed concerning the character of the inferior animals, which are plainly inconſiſtent with this notion, and which would therefore lead us ſo ſuſpect it as falſe, even before entering into a particular examination of the grounds on which it ſtands. One of the greateſt philoſophers among the ancients * was ſo fully convinced that the brutes poſſeſs the ſame powers of intelligence as men, that he repreſented them to his diſciples as animated by ſouls which had previouſly acted a part in human bodies, and, for that reaſon, enjoined them to treat thoſe their humbler brethren with gentleneſs and humanity, and to beware of ever ſhedding their blood. The ſame opinion ſtill prevails through the eaſt; and it has actually ſuch influence on the manners of the Gentoos, that they will periſh of hunger rather than ſhed the blood, or eat the fleſh of an animal.

This opinion indeed, as well as that which degrades the brutes to the humble character of pieces of mere mechaniſm, may probably have originated from prejudice or careleſs obſervation. But, ſince natural hiſtory has begun to be more diligently cultivated, many obſervations have been made on the manners and œconomy of the inferior animals, which prove, that, if they are guided by inſtinct, that inſtinct is by no means a mechanical principle of action, but, in its nature and ſuſceptibility of improvement, often approaches nearly to the character of human reaſon. The manners of no one ſpecies among the brutes are uniformly the ſame in all the individuals belonging to it. Even in performing thoſe ac-

* Pythagoras.

tions in which they are ſaid to be guided by unvarying inſtinct, different individuals diſplay different modes of conduct. It is probable, that if we were to examine their manners and œconomy with the ſame minute and careful attention with which we obſerve the conduct of our own ſpecies, we ſhould find thoſe of their actions which we call *inſtinctive* much more diverſified than we imagine: the general reſemblance,—the family likeneſs, would no doubt ſtill hold; but we ſhould ſurely diſcover the character of the individual to be diſtinctly marked, as well as that of the ſpecies. The laws of analogical reaſoning do not juſtify the idea that the brutes act, on any occaſion, abſolutely without deſign. On many occaſions they undeniably act with deſign: The dog obeys his maſter; he traces his footſteps in order to overtake him: he even attempts to make returns of gratitude for the kindneſs with which he is treated. Others of the inferior animals behave in a ſimilar manner. It ſeems therefore more probable that the inferior animals, even in thoſe inſtances in which we cannot diſtinguiſh the motives which actuate them, or the views with which they proceed, act not altogether without deſign, and extend their views, if not a great way, yet at leaſt a certain length forward,—than that they can be, upon any occaſion, ſuch as in rearing their young, building neſts, &c. actuated merely by feeling, or over-ruled by ſome myſterious influence, under which they are nothing but inſenſible inſtruments.

The facts from which this induction is drawn, have of late forced themſelves on obſervation, in ſuch a manner as to give riſe to a very *curious* theory *. It has been thought better to degrade mankind nearer to the ſame level

* See Tranſactions of the Royal Society of Edinburgh, Vol. I. p. 39. to 45.

level with the brutes, than to elevate the brutes to the rank uſually aſſigned to mankind. The human mind has been repreſented as a bundle of inſtincts, only a little larger than thoſe bundles of the ſame materials which have been beſtowed on the brutes. Obſerving, that the inferior animals ſeemed, on many occaſions, to act upon the ſame principles with mankind, and unwilling to allow that the former can ever act with deſign; the author of this theory has contrived to explain the phænomena by denying deſign to his own ſpecies.

But, we will not tamely ſurrender our rights. It is better to ſhare them with others than to be entirely deprived of them. We are conſcious of comparing ideas and of forming deſigns. If theſe operations are called inſtincts,—very well: this is not to advance a new doctrine, but to propoſe the uſe of new terms. Yet thoſe already in uſe ſeem ſufficiently adequate to the purpoſes for which they are employed. Let mankind ſtill be allowed to reaſon, and to act with deſign; even though it muſt be granted, that the brutes too reaſon, but not ſo ſkilfully, and form deſigns, but deſigns much leſs extenſive than thoſe of mankind.

We not only accompliſh ſuch purpoſes as we propoſe to ourſelves, by the uſe of ſuch means as prudence ſuggeſts; but we are alſo ſubject to laws, by the influence of which our conduct, whatever it be, naturally produces certain effects on our character and circumſtances, which we neither previouſly deſired nor foreſaw. The drunkard, for inſtance, ſits down only to ſwallow a liquor of which he is fond, or to join in that noiſy mirth which reigns among his fellows; but he inſenſibly acquires a habit which he did not think of, and by indulging in that habit, unintentionally produces very unhappy changes on his health and circumſtances. The benevolent

man,

man, in the ſame manner, when he interferes to relieve his brother in diſtreſs, does not probably attend to all the effects which his conduct, in this inſtance, is likely to produce, either to himſelf or to the perſon whom he relieves: And of human actions in general it may be obſerved, that their conſequences always extend much farther than the deſign or foreſight of the agent. Beings of ſuperior intelligence might regard mankind as incapable of deſign, with juſt as much reaſon as we have to deny the brutes any guiding principle ſuperior to blind and ſimple inſtinct. We, however, are conſcious of deſign; though our deſigns are commonly narrow, and our views limited: why, then, aſſign the inferior animals to the guidance of an unmeaning impulſe? Were it proper to enter more minutely at preſent into a diſcuſſion of this point, it might be eaſy to prove, by an induction of particulars, that the brutes actually compare ideas and deduce inferences; and when we conſider their docility, and mark the variety of their manners, it appears almoſt abſurd to deny that they form deſigns, and look backward on the paſt, and forward towards the future, as well as we *.

We may conclude, then, with reſpect to the inferior animals, that they poſſeſs, in general, the powers of perception, memory, conſciouſneſs; with various affections, paſſions, and internal feelings; and even, though perhaps in a meaner degree, thoſe powers of comparing and judging which are neceſſary to enable an animated being to form deſigns, and to direct its actions to certain ends. Their proſpects towards the future are evidently very confined: they cannot review the paſt with ſuch a ſteady eye as man; imagination is not, with them, ſo vigorous and

* The ſubject of *Inſtinct* will be more fully conſidered in an Appendix to the third volume of this Work.

and active as with us, and is confined within a much narrower range. But ſtill they are not abſolutely confined to preſent ſenſations; they connect ſome part of the paſt and of the future with the preſent. When we contemplate their manners, we behold not ſocial intercourſe regulated among them by the ſame forms as among us: Their characters and circumſtances differ ſo conſiderably from ours, that though the great principles of right and wrong may, wherever they are perceived, remain the ſame to them as to us; yet the application of thoſe principles to particular caſes muſt be very different among them from what it is with us. Thus, philoſophers have fancied imaginary ſtates of human ſociety, in which the preſent laws of diſtributive and commutative juſtice could not be obſerved *: but even in ſuch ſtates of ſociety, the fundamental principles of juſtice would continue obligatory, and would only be varied in their application. The brutes appear, in ſhort, to poſſeſs, but in a more imperfect degree, the ſame faculties as mankind. Inſtinct muſt always be a ſimple principle, an original feeling; the only buſineſs of which is to rouſe to action,—to call the reaſoning powers to exert themſelves. To talk of inſtinctive principles that admit of improvement, and accommodate themſelves to circumſtances, is merely to introduce new terms into the language of philoſophy. No ſuch improvement or accommodation to circumſtances can ever take place without a compariſon of ideas, and a deduction of inferences. When we conſider with how much difficulty that acquaintance with the manners and cuſtoms of mankind, which we call *knowledge of the world*, is obtained, we cannot be ſurpriſed that even philoſophers ſhould be ſo imperfectly acquainted

* See, in Hume's Eſſays, an Enquiry concerning the Principles of Morals.

ed with the more minute particulars in the manners and œconomy of the brutes. To man their manners are much leſs intereſting than thoſe of his own ſpecies; and there are, beſides, many difficulties to prevent us from becoming intimately acquainted with them, however earneſtly we may turn our attention to this object.

If, to theſe powers by which animals are ſo eminently diſtinguiſhed above the ſpecies of the vegetable and the mineral kingdom, we add the peculiarities of their form, of the ſtructure of the interior parts, and of their exterior covering,—the happy adaptation of all their organs to the purpoſes for which they ſeem intended by nature,—and the wiſe proviſion by which they are enabled to continue their kind; we cannot but conſider them as conſtituting by far the moſt eminent order among the works of creation. They alone are capable of enjoyment: The reſt of the univerſe ſeems to be intended for their accommodation. The enjoyments which they are formed to receive, the duties which they are deſtined to fulfil, and the laws by which the duty and the happineſs of all animals are ſo cloſely connected, afford the moſt eminent proofs of the perfection of the divine nature, that the works of creation exhibit. The inferior parts of nature are beautiful, or grand, or regular, only in proportion as they are formed to excite certain ſentiments in the minds of animated, thinking beings; at leaſt, were they not calculated to contribute to the happineſs of ſuch beings, by communicating to them agreeable ſentiments, their order, magnificence, and beauty, would be loſt, without ſerving any ends.

OF QUADRUPEDS.

As animals occupy the moſt reſpectable rank among the works of creation; ſo many reaſons concur to induce us to conſider quadrupeds as being, next after our own ſpecies, the chief among thoſe claſſes of animated beings with which we are acquainted.

In this claſs are our beſt friends, and our moſt formidable enemies. The dog, the horſe, the cow, the cat, the ſheep, the aſs, the mule, and the elephant, are the principal favourites and moſt uſeful aſſiſtants that mankind find among the inferior tribes. The wolf, the lion, the tyger, the river-horſe, make the moſt obſtinate reſiſtance to the authority of the lord of the lower creation; and notwithſtanding his ſuperior cunning and addreſs, and his oppoſing the ſtrength and activity of numbers to their ſingle and irregular exertions, frequently give him the moſt mortifying proofs of the precarious nature of his dominion.

Beſides their abilities to aſſiſt or annoy us, there are other circumſtances which recommend this claſs of animals in a particular manner to our notice. Their ſituation and character are ſuch as to afford us opportunities of more frequent intercourſe with them than with other animals. Fiſhes inhabit a different element; birds mount aloft in the air, and when they reſt upon the earth, generally prefer places inacceſſible to man; inſects are almoſt ſo minute as to elude our obſervation; reptiles ſhun our ſociety, and their manners are far from inviting:—But quadrupeds cannot ſo eaſily avoid us; many of them eagerly aſſociate with us, unleſs repelled by injuries; their manners and circumſtances bear a conſider-

able reſemblance to our own; and the characters of many of them naturally attract our notice, and engage our affections.

This claſs of the inferior animals, ſo particularly related to man, are remarkably ſuperior in ſize and ſtrength to thoſe belonging to the other claſſes. The horſe, the ox, the camel, the elephant, are among the ſtrongeſt of the land animals. Few of the inhabitants of the ocean, or of rivers, are equal to the hippopotamus; and the cetaceous animals, which, from ſimilarity of internal ſtructure, from their being viviparous, and from their being furniſhed with breaſts, are conſidered as approaching pretty near to the character of quadrupeds, are by far the largeſt animals of the waters.

In ingenuity, perhaps not leſs than in ſtrength, quadrupeds enjoy alſo a ſuperiority over moſt other animals. The docility of the dog and the horſe are well known. Of the former, innumerable wonderful ſtories have been told; many of which muſt no doubt be falſe: but there are ſtill enough of them, related on unqueſtionable authority, to ſerve our preſent purpoſe. The addreſs, with which horſes are trained to perform the evolutions of military diſcipline, affords the beſt proof of the extraordinary docility and ſagacity of theſe animals. The cunning, and indeed the whole œconomy of the monkey tribe, ſeems to exceed even the ordinary inſtances of human ingenuity. The ſagacity and the ſocial diſpoſitions of the beaver are not leſs admirable. In ſhort, ingenuity, or the moſt wonderful inſtincts, little inferior in many inſtances to the boaſted wiſdom of man, diſtinguiſhes this claſs of animals, as eminently as form, ſtrength, ſize, and relations to the human ſpecies, above the other lower ranks of the animal creation.

In

In beauty and elegance of form, too, quadrupeds greatly excel moſt other animals. We admire the downy plumage, the brilliant colours, and the melodious voices of birds: the gaudy painting of the butterfly, the *emperor of Morocco*, and various other inſects, charm the virtuoſo: golden fiſhes and ſpotted lizards find likewiſe their admirers: But the fine proportions of the dog and the horſe are unequalled among the other tribes of animated nature; and, compared with the beauties of ſhape, thoſe of colour are of a very inferior kind. We are, perhaps, better judges of the beauty of the tame quadrupeds than of that of other animals. Habit has amazing power to reconcile us to things odious, and to render us fond of things which we have regarded with indifference: the forms of theſe animals are familiar to us; and it may be for that reaſon that they pleaſe. Beſides, utility has certainly ſome influence on our ideas of beauty. However theſe things be, it is undeniable that among the claſs of quadrupeds are to be found the animals the moſt remarkable for elegance and harmony of ſhape.

When man proudly boaſts that the earth was made for him, a little reflection may lead him to acknowledge, that, at leaſt in a ſecondary view, it has been likewiſe deſigned for the accommodation and maintenance of theſe animals. Of the herbage and fruits which it produces, quadrupeds enjoy a greater ſhare than any other claſs of the inferior animals; a greater, perhaps, than even man himſelf.

Claſſification of Quadrupeds.

QUADRUPEDS may be arranged under four diviſions:—Hoofed: Digitated: Pinnated: and Winged.

DIVISION I.

Hoofed quadrupeds are either whole-footed or cloven-footed.

SECTION I.

In ſyſtems of Natural Hiſtory, the preference is generally given to the whole-footed.

GENUS I.—*The Horſe.*

THE HORSE may be ranked at the head of the whole-footed quadrupeds. The hoof of animals of this genus conſiſts of one piece; and they have, in each jaw, ſix cutting teeth. Theſe are the diſtinguiſhing characteriſtics of the genus.

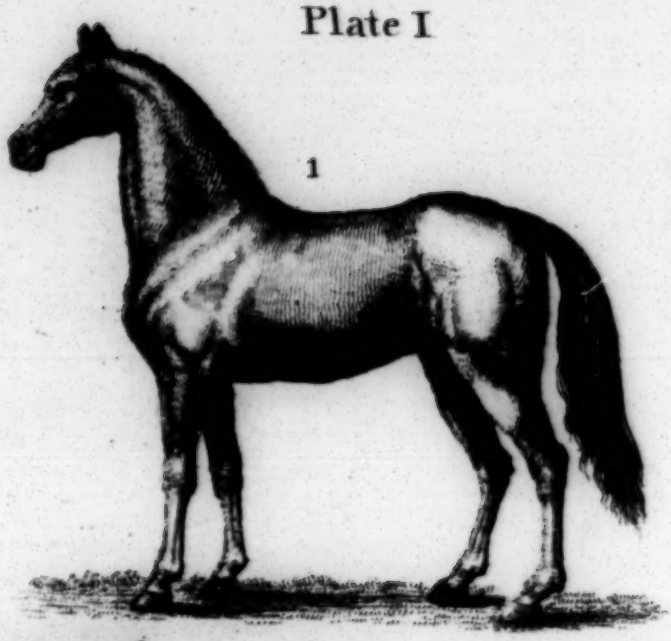
SPECIES I.

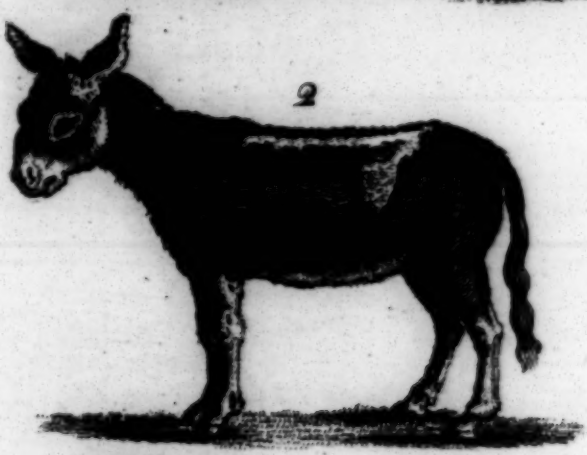
Of the animals which the Natural Hiſtorian claſſes together under the generic denomination of *Horſe*, the firſt in dignity is undeniably that ſpecies which, in popular language, receives from us—the male, the name of *Horſe*, the female, that of *Mare*.

This ſpecies of animals, *Mr. Pennant* in his Hiſtory of Quadrupeds *, and in his *Britiſh* Zoology †, diſtinguiſhes by

* Vol. I. p. 1. 4to. Lond. 1781. † Vol. I. p. 1. 8vo. Lond. 1776.

Plate I







1. HORSE 2. ASS 3. ZEBRA

by the epithet *Generous: M. Buffon* calls it *le Cheval**, the ordinary name in the French language: From *Linnæus*, in his Syſtem of Nature, it receives the name of *Equus Caballus*.

The mane of this animal is long and flowing, and its tail covered all over with long hairs.

The horſe is known among moſt nations in the world, in a domeſtic ſtate. In gracefulneſs of form and dignity of carriage, he appears ſuperior to every other quadruped. Among all the inferior animals, man has found no other ſervant equally manageable and uſeful with the horſe. He is lively and high ſpirited, yet gentle and tractable; vigorous and active; keen and ardent in his exertions, yet firm and perſevering. He ſeems equally qualified for all the different purpoſes for which man can employ his ſervices: he ſubmits peaceably to the draught; rejoices in the race; in hunting, ſeems to catch the eagerneſs of his rider, and diſdains every obſtacle; on the road, proceeds cheerfully, and ſeems to acquire for his maſter the attachment of a companion; in war, he learns to perform every evolution with the utmoſt dexterity, and diſplays a degree of ardour for battle which the courage even of the braveſt ſoldier cannot exceed. He is liable to ſeveral diſeaſes, though not to ſuch a variety as his maſter. To ſome of theſe he would, no doubt, be naturally ſubject in any ſtate; others of them are occaſioned by our wanton abuſe of this noble animal; and others, perhaps the greater number, he owes to our ill-directed fondneſs and care. He feeds upon graſs and grain; fights with his hoofs and teeth; defends himſelf from flies with his tail.—The ſkin of this animal is uſed for collars and harneſs, and other ſimilar purpoſes; and the hair for chair bottoms, floor-cloths, and fiſhing-lines. The fleſh is

* Hiſt. Nat. tom. vii. p. 249. Edit. Cinq. Paris, 12mo.

is eaten by ſome rude nations, among whom the animal abounds: the milk of the mare is alſo drunk; and the *Kalmuks* and *Mongals* prepare from it a ſpirit of conſiderable ſtrength. The period of geſtation is two hundred and ninety days. The mare ſuckles her foal with fondneſs, and defends it from injury. The young horſe or mare does not acquire the canine teeth till the age of five years. The voice of this animal is peculiar; we call it *neighing*. The male becomes capable of propagating the ſpecies at the age of two or three years; and the female is ripe for his embraces even at an earlier period. But the foals produced from ſuch young parents are extremely puny. The horſe ſhould always be four, or four years and an half old, before he is admitted to this taſk; and even then, not unleſs he be vigorous and ſtrong built. Horſes are known to live, when their days are not ſhortened by ill uſage, commonly to the age of five and twenty or thirty years: Such as are remarkably large ſeldom live ſo long as thoſe of a moderate ſize *.

The horſe, like the other tame animals, has, no doubt, been originally domeſticated by human art. Wild horſes are ſtill found in various parts of the world. But this ſpecies of animals have been ſo long known in a domeſtic ſtate, and their uſeful qualities have cauſed them to be diffuſed ſo generally over the globe, that it is impoſſible to diſcover, with any degree of certainty, of what country they were originally natives. Wild horſes are found in the country lying around the lake *Aral*; on the river *Tom* †, in the ſouthern part of *Siberia*; in the great *Mongalian* deſerts; and among the *Kalkas*, north-weſt of *China*. Theſe

* I am informed, upon reſpectable authority, that a horſe, who was ridden by a field officer, in ſerving againſt the rebels, in the year 1715, died at Pennycuick, only in the year 1760; and muſt conſequently have been, at the time of his death, more than fifty years old.

† Bell's Travels. I. 257, Edit. Edin. 1788.

Theſe horſes are ſmaller than the domeſtic; their hair, particularly in winter, is very thick, and of a mouſe colour. Their heads are larger, in proportion to their bodies, than thoſe of the tame horſes; and their foreheads remarkably arched. They herd together in large companies, and often gather round the horſes of the *Mongals* and *Kalkas*, while grazing in the fields, and carry them off among them. They are obſerved to be very watchful of their common ſafety. While the herd is feeding, one of their number is placed as centinel on an eminence; when danger of any kind approaches, he warns his fellows by neighing, and they all betake themſelves to flight, with the utmoſt velocity *. Yet, the *Kalmuks* frequently ſurprize them, ride in among the herds, on very fleet tame horſes, and kill them with broad lances. Hawks are alſo uſed in taking the wild horſes; thoſe birds are taught to fix on the forehead of the quadruped, where they teize and diſtreſs it in ſuch a manner as to prevent it from eſcaping its purſuer.

In the wilds of *Africa* too, the horſe is ſaid to be found in a ſtate of nature. In the country adjoining to the *Cape* of *Good Hope*, numbers of wild horſes are found. Their ſize is there ſmall,—their diſpoſitions vicious; and no art, we are told, can ſucceed in taming them. The negroes kill them for eating.

In the deſerts, on each ſide of the river *Don*, particularly towards the *Palus Mæotis* and the town of *Backmut*, there are a race of wild horſes, which are known to be the progeny of the *Ruſſian* horſes that were turned looſe from the ſiege of *Aſoph* in the year 1697, for want of forage. The *Coſſacks* chaſe and kill theſe for their ſkins. When they happen to take a young one, it is

* Bell's Travels, I. 257, Edit. Edin. 1788.

is domeſticated by coupling it for a few months with a tame horſe. Theſe are much ſtronger than the tame horſes of the country. The horſes of the Tartars copulate and breed with the wild horſes which carry them off: the offſpring produced by this intermixture are diſtinguiſhable by their colours. In *Spaniſh America*, there are vaſt herds of wild horſes. But they are known to have been originally introduced by the *Spaniards*, when they firſt conquered that country. Being ſuffered to run about in thoſe extenſive and unappropriated fields and foreſts, without reſtraint or culture; they have become ſtrangers to man, and have multiplied ſo amazingly, that they are now ſpread over all the ſouth of the *American* continent, nearly to the *Straits* of *Magellan*. The inhabitants of thoſe regions are not without arts for taking them. When taken, they are eaſily tamed; and though ſuffered to return to their former ſtate of freedom, they never afterwards forget their maſters. Ancient authors mention wild horſes as inhabitants of many other countries. *Herodotus* ſpeaks of a race of white wild horſes that were found on the banks of the river *Hypanis* in *Scythia*, and mentions another tribe in the north of *Thrace*, whoſe hair was five inches long, all over the body. *Strabo* ſpeaks of wild horſes on the *Alps*, and in *Spain*. *Cardan*, who viſited Scotland in the minority of Queen *Mary*, and had the honour of curing *Hamilton*, Archbiſhop of *St. Andrews* of a dangerous diſeaſe, relates that wild horſes then abounded in this country, and in the *Orkney* iſles. And, indeed, we are told, that in the *Highlands* of *Scotland*, many of that ſmall breed of horſes, known in the low countries by the name of *ſhelties*, ſtill run about, almoſt wild, among the hills, in a ſtate very little different from that of the wild horſes in *South America*. It is worth notice, that the fabulous

fabulous records in which the earlier hiſtory of ancient *Greece* is preſerved, repreſent horſes as having been firſt domeſticated by the inhabitants of *Theſſaly*, a country bordering on *Thrace*. The fable of the *Centaurs* is well known. From every fact that ancient authors have preſerved, or modern travellers relate concerning the horſe in a wild ſtate, this ſpecies of animals appear to have been deſtined by nature for inhabitants, not merely of one or two different tracts of country, but of a conſiderable part of the globe. An animal ſo uſeful and ſo friendly to man, is happily qualified to be his ſervant and companion in many varieties of climate, and through a great diverſity of local circumſtances.

The wild horſes of *Arabia* are the moſt remarkable for ſwiftneſs and elegance of ſhape. They are found in the deſerts; but are not now ſo numerous as they once were. The natives uſe various arts, and diſplay the greateſt activity and addreſs in taking them. The ſwiftneſs of the animal, after he is taken, is tried in chacing the oſtrich: If ſucceſsful in this chace, he is valued at a very high price. Horſes are with the *Arabians* a principal article of commerce. *Arabian* horſes are among every nation eagerly ſought after. They cannot, however, be called wild in any other reſpect than the horſes in *South America*, or thoſe on the mountains in the north of *Scotland*. The *Arabians* ſuffer them to breed and multiply in the deſerts, with a deſign to take and ſell them at proper ſeaſons, or train them for their own uſe. Every *Arabian*, however humble his ſituation, is poſſeſſed at leaſt of one horſe. They prefer the mare, as being more capable of bearing hunger, thirſt, and fatigue. They generally diſpoſe of their horſes to the *Turks*; excepting ſuch as they mean to keep for ſtallions. Much attention is paid to the genealogy of a horſe; and many formalities are uſed in

aſcertaining it. The *Arabian* and his family live on a familiar footing with their favourite domeſtic animal: The mare and her foal, the huſband, the wife, and their children, uſually live all together under the ſame roof, and ſleep in the ſame apartment: the children play and fondle about the mare and her foal without fear or injury. The *Arabian* never beats or abuſes his mare, nor applies the ſpur or the laſh, unleſs on ſome very urgent and extraordinary occaſion. Thoſe people are at great pains in dreſſing their horſes; but do not, like us, mutilate them by way of ornament. The *Arabian* horſes are ſeldom more than fourteen, or fourteen hands and an half high: they are rather inclined to be lean than fat: in their motions, they riſe higher from the ground, and make a ſhorter ſtroke than other horſes. In *Arabia* the breed is never croſſed as in other countries, but preſerved unmixed, with the utmoſt ſolicitude. It has been inferred from this, that *Arabia* may probably have been the original country of horſes.

The ſame race of horſes has ſpread into *Barbary*. In *Gambia* and *Senegal*, the chiefs have very beautiful horſes, of a ſmall ſize: In ſwiftneſs and beauty they are next to thoſe of *Arabia*. The *Arabian* breed has likewiſe ſpread into *Egypt*, *Turkey*, and *Perſia*. The celebrated *Venetian* traveller, *Marco Paulo*, relates, that he ſaw in *Perſia* a ſtud conſiſting of ten thouſand white mares; and, in one province of that empire, a great number of very large and very fleet horſes, whoſe hoofs were ſo hard that they did not need to be ſhod. The *Turks* procure their horſes from *Hungary* and *Tartary*, as well as from *Arabia*. The *Tartars* aſſociate with their horſes with almoſt as much familiarity as the *Arabians*. That entertaining, though vain traveller, *De Tott*, who had peculiar opportunities for obſerving the manners of the

the *Tartars*, relates in his Memoirs *, that the *Noguais* mark their horſes, as well as their oxen and dromedaries, with a hot iron on the thigh, to diſtinguiſh the horſes of different proprietors. They drink the mare's milk as a nouriſhing and delicious beverage: and though they never kill a healthy, vigorous horſe on purpoſe to eat him; yet when any of theſe animals is accidentally killed, or reduced by diſeaſe to the point of death, provided they can be early enough to bleed the dying animal, they eagerly devour the fleſh †. The Baron likewiſe relates, that an horſe of his happening to die in a fatiguing march with the Cham's army, the *Noguais* eagerly begged the carcaſe, to eat; and as he happened to be a white horſe, conſidered his fleſh as a great delicacy ‡. As *Muſſulmans*, they are required by the law of *Mahomet* to eat the fleſh of no animal that has died in its blood; but caſes now and then occur in which this law can ſcarce be obſerved. The *Tartarian* horſes are ſo eaſily ſubſiſted, on a march, that thoſe wandering people are enabled to take out vaſt numbers with them in their expeditions. In the army of the Cham, when *De Tott* accompanied him, there were no fewer than three hundred thouſand horſes §. The *Noguais* are not very expert at dreſſing the hides of their horſes; yet they know how to apply them to very uſeful and comfortable purpoſes. The ſame traveller mentions ¶, that he had once occaſion to ſee a garment very ſpeedily made, out of the ſkin of a dead horſe. A young man, naked, received the ſkin on his ſhoulders, as ſoon as it was fairly ſeparated from the carcaſe. A woman, who performed the office of taylor, immediately cut the ſkin ſo as to fit it to the different parts of his body; and then ſewed it about him while it was ſtill raw; and the youth was accordingly,

* I. 329. Eng. Tranſ. 1ſt Ed. † *Id.* I. 352. ‡ I. 454.
§ I. 459. ¶ I. 344.

cordingly, in leſs than two hours, new clad in an excellent *brown-bay* coat. The *Koumiſs*, the vinous liquor which thoſe people prepare from mare's milk, is made by adding to any quantity of that milk, taken ſoon after it has been milked, and while it is ſtill freſh, one ſixth part of water; then increaſing this quantity by an addition of one eighth part of the ſoureſt cow's milk that can be obtained, or a ſmall portion of old *Koumiſs*, which is ſtill better for the purpoſe; covering this mixture up, in an wooden veſſel, with a thick cloth; and placing it in a ſituation where it may be kept moderately warm. At the end of four-and-twenty hours the milk is entirely ſour, and a thick ſubſtance is found upon the top. This thick ſubſtance is then broken, and mixed intimately with the ſour fluid beneath, by churning. To render this mixed liquor perfectly homogeneous, it is poured, after being for a conſiderable time agitated with the churning ſtaff, into a larger and narrower veſſel, in which the agitation is repeated with ſtill better effects. After undergoing theſe operations, it is uſed, in this ſtate, under the name of *Koumiſs*. The *Kalmuks* uſe leathern bags in preparing this liquor and carrying it about with them, which are of a conical form; and, from their always containing a ſmall remain of the old *Koumiſs*, to be uſed as ſouring in preparing more, they are uſually of a very diſagreeable ſmell. An ingenious phyſician, who tells us he has often preſcribed it as a medicine, aſcribes to it many medical virtues *.—A ſpirit is diſtilled from this vinous liquor.

The horſes of *Arabia* and *Barbary* are often brought into *Europe*; and through all the countries of the eaſt they

* See in the firſt volume of the Tranſactions of the Royal Society of Edinburgh, a valuable paper on the method of the preparing *Koumiſs*, by Dr. James Grieve.

they are highly prized. The *Perſian* horſes are ſaid to be not inferior to ſome of our fineſt *European* horſes; yet ſtill the *Arabian* horſes are eſteemed preferable to them. The horſes of *India* are far from being of a good kind: they are extremely ſmall; and *Tavernier* * relates, that when he viſited that part of the eaſt, the young Mogul prince, who was about ſeven or eight years of age, uſed to appear in public, mounted on a ſmall horſe, elegantly ſhaped, the ſize of which was not larger than that of a greyhound. In *India*, therefore, the *Arabian* horſes are very much ſought after. The horſes of *Barbary* have been introduced into Italy and *Spain*. The *Spaniſh* genette is much eſteemed. This variety of the horſe is ſmall, but beautifully ſhaped, and very ſwift: The head is rather large in proportion to the body; the mane thick; the ears long, but well pointed; the eyes animated; the ſhoulders rather clumſy; the breaſt full and large; the croup with the ſame proportions; the legs finely ſhaped, and almoſt without hair: the paſtern rather beyond proportion large; and the hoof rather too high. They are uſually of a black or bay colour. The *Italian* horſes are not, at preſent, in the ſame eſtimation in which they once were. They are of a large ſize, and high-ſpirited, and move very gracefully; they are much diſpoſed to prance. The *Daniſh* horſes are excellent for the draught. They are ſtout and well built; but ſeldom elegant, or finely proportioned. They move well; and accordingly make good war horſes. They are of all different colours; ſometimes ſtreaked like the tyger, or ſpotted like the leopard. The *German* horſes are originally of the *Arabian* and the *Barbary* breed. They are, however, ſmall, ill-ſhaped, and weak, and have tender hoofs: But the *Hungarian*

* Tome 3. p. 334, quoted by Buffon, Hiſt. Nat. Tome 7. p. 354.

garian horſes are excellent for both the draught and the ſaddle. The *Dutch* horſes are preferred for the draught, through *Europe*.

The *Engliſh* horſes are at preſent eſteemed through *Europe*, more perhaps than thoſe of any other country. The attention paid, in our iſland, to the culture of this ſpecies of animals, and the vaſt ſums expended on ſtuds and horſe-races, muſt naturally produce this effect. Horſe-racing has long been a favourite amuſement among the *Engliſh*, and has been purſued among them with all that ardour which diſtinguiſhes the national character. In conſequence of this, by a judicious mixture of different breeds, and by careful attention to every circumſtance proper for improving the good qualities, and correcting the defects or imperfections of the animal, the Engliſh have at length rendered their breed of horſes famous for all the different excellencies of the horſes of different countries. The inſtances of *ſwiftneſs* which the horſes of this iſland have diſplayed at *Newmarket*, are almoſt incredible. The celebrated *Childers* has been repeatedly taken notice of by natural hiſtorians *, for extraordinary ſwiftneſs. *Mr. Pennant*, whoſe information may be almoſt always ſafely relied on, as ſufficiently authentic and accurate, relates, that this horſe is known to have run, at different times, at the rate of eight feet and an half in a ſecond, nearly a mile in a minute. *Childers* was of an *Arabian* breed; and all our extraordinary race-horſes are of the ſame deſcent. The horſes of this iſland are no leſs remarkable for *ſtrength* than for ſwiftneſs. Thoſe of *Yorkſhire*, employed in conveying the manufactures of that county through the kingdom, uſually carry, whatever the difficulties of the road, a burden of 420 pounds. Our *Britiſh* mill horſes often carry, at one load,

* Pennant Brit. Zool. I. 2. Goldſ. Nat. Hiſt. II. 367.

load, the weight of 910 pounds. The horſes on which our cavalry are mounted, are well known to be ſuperior in ſtrength and activity to thoſe in the armies of every other European nation. Even ſo early as the period when Cæſar invaded the iſland, the activity and good diſcipline of the *Britiſh* horſes were ſo eminent as to enable the cavalry of the natives to make an impreſſion of terror upon his legions *. Under the *Anglo-Saxon* monarchy, it appears that the *Engliſh* horſes muſt have been much eſteemed by foreigners; for there is a law of *Athelſtan*, prohibiting their exportation, except when intended for preſents †. *Spaniſh* horſes were introduced into *England* in the reign of *William* the *Conqueror*. In the days of *Henry II.* the citizens of London were fond of horſe-racing. In the reign of Queen *Elizabeth*, this diverſion appears to have been purſued to exceſs by ſome of the nobility. In the reign of James I. *Croydon* in the South, and *Garterly* in *Yorkſhire*, were celebrated courſes. At preſent, no ſpecies of gaming is more eagerly purſued by our men of fortune than that to which horſe-racing gives occaſion. All ranks affect, at times, the dreſs of the Jockey. The *Engliſh* have even communicated their favourite paſſion to their *French* neighbours. *Engliſh* horſes are eagerly bought in *France*; and horſe-racing has become, of late, the favourite diverſion of the *French* nobility, in conſequence of their intercourſe with the *Engliſh*. *Wales* and the *Highlands* of *Scotland* afford a ſmall breed of horſes, which are vicious and intractable, but very hardy and patient of fatigue.

Thoſe horſes which are eſteemed the beſt proportioned, and moſt elegantly ſhaped, have the breaſt broad, the hips round, and the mane long,—the countenance fierce, and ſomewhat reſembling that of a lion,—the noſe ſimi-

lar

* Cæſar, Lib. IV. c. 29. and 30. † Pennant, Brit. Zool. I. 4. 4th. edit.

lar in form to that of the ſheep,—the head, legs, and ſkin of a deer,—the throat and neck of the ſame form with theſe parts of the wolf,—the ear and tail of a fox: —Such, at leaſt, is Camerarius' account of the beauties of a fine horſe, as copied by Goldſmith *.

II. *The Wild Mule.*

THIS animal, deſcribed by Dr. *Pallas* and Dr. *Zimmerman*, and after them by Mr. *Pennant*, has received the *Latin* name of *Equus Hemionus*. By the *Mongols* it is called *DShikketei*, which is ſaid to ſignify *the eared;* and by the Chineſe *Yo to tſe*, *the mule*. It ſeems to have been known to the ancient naturaliſts, *Ariſtotle* †, *Theophraſtus* and *Pliny* ‡. But the three above mentioned are the firſt natural hiſtorians who have taken particular notice of this ſpecies in modern times.

In its ſize and general appearance this animal nearly reſembles the common mule, the progeny of the horſe and the aſs. Its head is rather large in proportion to the body; its forehead is flat, and becomes narrow towards the extremity of the noſe. Its ears are conſiderably longer than thoſe of the horſe; they ſtand erect; and are lined with a thick coat of whitiſh curling hair. In both jaws it has only thirty-eight teeth; whereas the common horſe is poſſeſſed of forty. Its neck is ſlender and firm, not looſe and ſoft. The breaſt ſwells forward and is ſharp. The limbs are long and finely ſhaped; the thighs thin like the common mule's. There is an oval callus within the fore legs; but none on the hinder legs. The hoofs are oblong, ſmooth, and black. The tail reſembles

* Nat. Hiſt. vol. II. 372.

‡ Hiſt. An. Lib. VI. c. 36. p. 785, Tolos. 1619. Folio.

† Pliny uſes the following words: "Theophraſtus vulgo parere in Ca-"padocia; ſed eſſe ibi animal ſui generis," Nat. Hiſt. Lib. VIII. c. 69 Paris a Barbou, impr. 12mo.

ſembles that of a cow: it is ſlender; for one half of its length bare; and covered on the other with long aſh-coloured hairs.

This animal changes its coat with the ſeaſon. In winter, its hair is about two inches long, ſoft, like that of a camel, waved on the back,—and, on the ſuperficies, of a grey colour, but under that, of a browniſh aſh-colour. In ſummer, the hair is much ſhorter, beautifully ſmooth, and marked all over the body with ſmall round ſpots. The extremity of the noſe is, at this time, white; and from that part, up the front, the colour is nearly tawny. The buttocks, the inſide of the limbs, and the under part of the belly, are white. A blackiſh teſtaceous line extends from the mane, along the ridge of the back, to the tail: this line becomes broader upon the loins, and narrower again as it approaches the tail. The upper part of the body is now of a light yellowiſh grey colour,—paler towards the ſides. The body of this animal, between the tip of the noſe and the baſe of the tail, is ſix feet ſeven inches long; the trunk of the tail meaſures one foot four inches; the hairs depend about eight inches beyond the extremity of the trunk. The height of the animal is about three feet nine inches.

The wild mule, the *Hemionos*, or *half-aſs* of *Ariſtotle*, is mentioned by that philoſopher to have been found, in ancient times, in *Syria* *. *Pliny* informs us, on the authority of *Theophraſtus*, that it was then found likewiſe in *Capadocia* †. This animal is no longer found in theſe countries; but it is now known for an inhabitant of the deſerts between the rivers *Oaow* and *Argun*, in the moſt ſouthern part of *Siberia*,—of the extenſive plains and deſerts of weſtern *Tartary*,—and of the celebrated ſandy deſert of *Gobi*, which reaches to *India*.

* Ubi ſupra. † Ubi ſupra.

Theſe animals ſhun tracts of wood, and lofty, ſnowy mountains. They are not numerous in *Siberia*: thoſe which are there met with ſeem to be only ſtragglers, that have originally wandered from the large herds which are found to the ſouth of the *Ruſſian* dominions. In *Tartary*, they frequent chiefly the country lying around the lake *Taricnoor*; a ſalt lake, which becomes ſometimes dry.

They live in ſeparate parties; each of which, conſiſting of mares and colts, with an old male at their head, is ſeldom above twenty, and frequently under that number. Their period of copulation is about the middle or the end of *Auguſt*. They produce only one foal at a time; at leaſt, the inſtances in which a female has more are very rare. In its third year, the young animal attains its full growth, with the due proportions of form, and the colours which diſtinguiſh it during the reſt of life. When the young have reached this age, the elder mules expel them from their ſociety, and they aſſociate with new parties of their own age. The wild mules uſually carry their heads drooping, and on a level with their bodies; but in running, they raiſe the head and erect the tail. They neigh in a deeper tone, and with a louder voice than the horſe.

They are extremely timid, and very cautious againſt danger. One of the males is ſtationed centinel to watch the approach of an enemy, and warn the herd. To elude the obſervation of the centinel, the hunters often creep ſlyly along the ground, till they get near. As ſoon as the animal notices a perſon approaching in this manner, he takes a wide circuit, and moves round, to make more particular diſcoveries: At length he makes off to the herd; and the whole flee with the utmoſt velocity. Sometimes the hunter ſhoots the centinel before he has

ſatisfied his curioſity. The ſwiftneſs of this animal is very amazing; it outſtrips even the *Antelope*. It is become proverbial for this quality among the nations to whom it is known in a ſtate of nature. The inhabitants of *Thibet* give it for a rider, *Chammo*, their God of Fire. The *Tartars* ſometimes take wild mules young, and unhurt; but always find them fierce and untameable. *European* arts might poſſibly be more ſucceſsful: but, were the wild mule taught to be peaceful and domeſtic, like the horſe, it would perhaps degenerate in ſpirit and ſwiftneſs. Its arts of annoyance and defence are, like thoſe of the horſe, biting and kicking. In rainy or ſtormy weather, theſe animals are leſs ſhy and more ſpiritleſs than at other times. Except on ſuch occaſions, or when the hunter comes upon them by ſurpriſe, and lurks behind a tomb, or in a ditch, when they come to drink, or eat the ſalt of the deſert, it is impoſſible to ſhoot, or take them. The *Mongalians* and *Tunguſi* prefer their fleſh to that of the horſe, and even to that of the bear: * they eſteem it very nouriſhing and wholeſome. The ſkin is made into boots. Their ſenſes of hearing and ſmelling are exquiſitely acute.

THE COMMON MULE is produced by the unnatural copulation of an horſe with a ſhe aſs, or a jack-aſs with a mare. The mules produced from the latter parents are always the beſt †, being larger than thoſe whoſe male parent is an horſe. Even in theſe, however, the qualities of the aſs predominate. It is well known that mules are incapable of propagation; but always a mongrel breed. Their form bears a conſiderable reſemblance to that of the aſs; and in their diſpoſitions they are rather

* Du Halde, Vol. IV. p. 134, 135, Brooke's Tranſ.

† Pennant's Brit. Zool. Vol. I. p. 16, Lond. 1776. Pen. Hiſt. Quad. p. 8. Lond. 1781.

vicious and intractable. The *Spaniſh* mules are ſuperior to thoſe of other countries: very large ones are bred in *Savoy*. In *Britain* *, a larger and ſtronger breed of mules has been obtained, by the importation of *Spaniſh* male aſſes for the purpoſe. In *Spain*, the mule is a favourite animal. It is well known to tread more firmly and ſecurely than the horſe. Perſons of quality in *Spain* prefer it, on this account, for drawing in their carriages. *Pliny* relates, as a fact authenticated by the public records of the *Athenians*, that a mule had been known to live to the age of eighty years †; and mentions farther, that the *Athenians* were ſo much pleaſed with the ſpirit and vigour with which that animal, in extreme old age, aſſiſted in drawing the materials for building a temple in that part of the city which was called the Citadel, as to make a law in his favour, by which the corn-merchants were prohibited from driving him off, if he ſhould at any time make free with their grain.

III. *The Aſs.*

The tame aſs is called by *Linnæus*, *Equus Aſinus*, and by *M. Buffon*, *L'ane*. The wild aſs has received from ancient and modern naturaliſts, the name of *Onager*.

This ſpecies is diſtinguiſhed by long ſlouching ears, a ſhort mane, and long hairs covering only the end of the tail. It is commonly aſh-coloured, with two black ſtreaks croſſing each other upon its ſhoulders.

The aſs, both in external appearance, and in the ſtructure of its bones, bears ſo conſiderable a reſemblance to the horſe, that, were it not incapable of producing, by copulation

* Britiſh Zoology, V. I. p. 17.

† His words are, "Mulum octoginta annis viviſſe, Athenientium monumentis adparet, &c." Lib. VIII. c. 69. Edit. Barbou.

copulation with the horſe, an animal capable of propagating its kind, it might be ſuſpected to be nothing but a degenerate breed of that ſpecies. By copulation with the horſe, however, it produces a mule; mules are univerſally barren: and as this is a diſtinction which runs through the whole of animated nature, it is regarded as marking the limits by which different ſpecies are divided.

In youth, this animal is rather handſome in its ſhape, ſwift, and playful; but, as it advances in life, the tame aſs, either from the natural effects of age, or from ill treatment, loſes its ſprightlineſs, and becomes ſluggiſh, ſtubborn, and awkward. It attains its full growth in the fourth or fifth year of its age, and lives generally to the age of five-and-twenty or thirty years. The male is capable of procreation at the age of two years and an half, and the female ſtill earlier. Both ſexes are remarkably laſcivious: the male has been known to die immediately after coition; and the female needs to be beaten, after being ſubmitted to the embraces of the male; to ſubdue the eagerneſs of her deſires which ſtill remain unſatiated, and prevent her from rejecting the cauſe of conception. Her parental tenderneſs is not inferior to the ardour of her amorous diſpoſitions: ſhe will accompany her young, or haſte to their relief, through the moſt formidable dangers; even flames and burning coals are, on ſuch an occaſion, no obſtacle. She brings forth in the twelfth month after impregnation; and, ſeven days after delivery, willingly admits the embraces of the male. She produces but one colt; the inſtances of two are very rare. The colt may be weaned after ſucking five or ſix months. The jack-aſs ſhould be as large and ſtrong as poſſible, not under three, nor older than ten years. His limbs ſhould be long; his body ſtrong built; his head

ſmall;

ſmall; his eyes lively and ſparkling; his noſtrils broad; his cheſt capacious; his loins round and full; his buttocks flat; his tail ſhort; and his hair ſoft, and of a gliſtering deep grey colour. The aſs ſleeps leſs than the horſe, and never lies down to ſleep but after having ſuffered much fatigue. He is leſs ſubject to diſeaſes than the horſe. The ardour of his amorous deſires increaſes, inſtead of diminiſhing, as he increaſes in years. The glanders was the only diſeaſe to which this animal was obſerved to be liable among the ancients. He is at preſent leſs liable to it than the horſe.

The aſs is not leſs inferior to the horſe in ingenuity and docility than in ſize and ſtrength. As ſoon as we begin to employ him in any kind of labour, he loſes all the ſprightlineſs and beauty of his early youth. Blows and chaſtiſement, of whatever kind, ſerve only to confirm his obſtinacy. The ſame dull inſenſibility, however, which renders the aſs ſo obſtinately ſtubborn, renders him ſober and patient. His rider is in no danger of being thrown to the ground from his quickening his pace unexpectedly. A ſmall quantity of food, and that of the coarſeſt kind, ſatisfies this animal. He does not deſpiſe even the thiſtle; but his favourite herb is the *plantane*. Like the horſe, he is capable of affection and attachment to his maſter. He diſtinguiſhes him among others; and ſeems even to diſcern him by the ſcent, when at ſome diſtance. His viſion is ſufficiently acute. His hearing is ſo remarkably delicate, that he is alarmed and frightened by the impulſe even of muſical ſounds. When he feels his load too heavy, he droops his head, and hangs his ears. When teazed and tormented by ill uſage, he opens his mouth, and draws back his lips ſo as to expoſe his teeth, in a manner ſomewhat like grinning. Like the horſe, he walks, trots, and gallops; but his motion is always

ſlower.

ſlower, and his ſteps ſhorter than thoſe of the horſe. For a ſhort way, he runs with conſiderable ſwiftneſs; but when he becomes weary, no arts can prevail with him to continue his exertions. He is very nice with reſpect to his drink: he diſdains to taſte any other but the pureſt water; takes only a ſmall quantity at a time; and is very careful not to dip his noſe into it. He is even afraid of wetting his feet, and turns out of his way to eſcape a puddle.

The aſs is ſometimes trained to be exhibited in ſhews. Mr. *Pennant* relates, that he was much diverted at ſeeing a fight between an aſs and a dog, at *les combats des animaux*; a ſpecies of entertainment in Paris, reſembling the Engliſh bear-garden. The dog could never ſeize the aſs; but the aſs ſometimes caught the dog in its mouth, and ſometimes flung him under its knees, and kneeled upon him, till he was at laſt forced to yield *.

Among us the aſs is uſed as a beaſt of burden—only by the loweſt of the people. He is frequently the companion of the wandering beggar; and bears his children, and the proviſions and rags which charity beſtows on him. In the more ſouthern countries of *Europe*, and in the *Eaſt*, where the aſs is ſtronger, more elegantly ſhaped, and more generous in his diſpoſitions, he is employed in more honourable ſervices, and kept for riding even by the rich and luxurious. The milk of the ſhe-aſs is eſteemed medicinal. It is chiefly for its milk that the aſs is valued in Britain. The ſkin being dry, hard, and elaſtic, is made into ſieves, drums, ſhoes, and parchment which is laid over with a thin coat of fine plaiſter and uſed in pocket-books. By the nations of the eaſt, the leather, called *ſagri* or *chagrin*, is prepared from the ſkin of the aſs. The ancients made their beſt

* Hiſt. of Quadrupeds, Vol. I. 11.

beſt flutes of aſſes' bones. *Mæcenas* perſuaded his cotemporaries in *Rome* to conſider the fleſh of the young aſs as very delicate eating; but after his death it was expelled from the faſhionable tables. In the days of *Pliny*, a herd of aſſes was very profitable to the farmer. The *Perſians* uſe the bile of the aſs as a remedy againſt dimneſs of ſight.

The aſs appears to have been originally an eaſtern animal. In the warm climates of the *Eaſt*, this animal appears to much greater advantage than in *Europe* and other northern regions. In *Senegal*, it is actually conſpicuous for beauty: its hair is there of a gliſtering mouſe-colour; and the ſtreaks which croſs on its back and ſhoulders have, inſtead of a ridiculous and unpleaſing, a very agreeable effect. In *Perſia* *, they have two diſtinct races of aſſes; of which one is of a heavy form, and ſlow in its motions; the other is elegantly ſhaped, has ſupple active limbs, bears its head high, and has a gloſſy ſkin. The latter of theſe breeds is obtained from *Arabia*, is treated with great attention, and uſed only for riding. The noſe is ſlit, that the animal may breathe more freely. It moves with great velocity. In *Arabia*, *Egypt*, *Barbary*, *India* and *Guinea*, the aſs is remarkable for its ſize and ſtrength: in ſome of theſe countries, it is ſtronger and more uſeful than the horſe. The *Indians* of *Madura* believe that the ſouls of their nobility after death animate the bodies of aſſes; and, for that reaſon, treat the animal with peculiar reſpect. We learn from the *Chronicon Pretioſum*, that aſſes were known in England in the days of King *Ethelred*; and the animal is again noticed in the ſame record, under the reign of *Henry* III. *Holingſhed* relates, however, that, in the days of Queen *Elizabeth*, there were no aſſes in the iſland: perhaps he may

* Chardin's Travels, Vol. II. p. 91. Lond. 1720.

may have been miſinformed; or the extinction of the race may have been owing to ſome accident. In *Sweden*, this ſpecies is extremely rare; and we know not if it has yet made its way into *Norway*.

The *Onager* of the ancients, which is called *koulan** by thoſe modern nations who have the beſt opportunities of being acquainted with it, is the ſame ſpecies with the aſs, which we have now deſcribed; only in a wild ſtate. Domeſtication, if it does not always improve the qualities of an animal, yet never fails to produce a conſiderable change upon them. The ſame plant exhibits different qualities in the garden, and in the field. And, though the effects of domeſtication do not ſo uniformly improve the animal as cultivation betters the qualities of vegetables, yet they conſtantly alter its nature in a greater or a leſs degree.

The forehead of the *koulan* is very much arched: Its ears ſtand always erect; they are lined with whitiſh, curling hairs, and ſharp-pointed: Its lips are thick; its noſtrils large and oval; and the end of the noſe ſlopes abruptly to the upper lip. It is taller than the tame aſs; its legs are much more elegantly ſhaped; and it bears its head higher. Its ſkull is remarkably thin. Its mane is about three or four inches long, of a dun colour, ſoft and woolly; and extending to the ſhoulders. The hairs at the end of its tail are coarſe, and about a ſpan long. The colour of its hair, in general, is a ſilver-white. The upper part of the face, the ſides of the neck, and the body, and the under part of the thighs, are flaxen coloured. The fore part of the body is divided from the flank by a white line, extending round the rump, to the tail. The legs and the belly are white. A ſtripe of waved, coffee-coloured, buſhy hairs, runs along the top of the back, from the mane to the tail. Another ſtripe

* Penn. Hiſt. of Quad. Vol. I. 8.

of the ſame colour, croſſes the former at the ſhoulders. Two beautiful white lines, one on each ſide, bound the dorſal band, and the mane. In winter, the hair of this animal is ſoft, ſilky, and waving: it bears, in this ſtate, a conſiderable reſemblance to the hair of the camel; it feels greaſy; and the flaxen colour is, now, moſt exquiſitely bright. In ſummer, the hair is very ſmooth, ſilky, and even; but certain ſhaded rays, pointing downwards, mark the ſides of the neck.

The *koulan* inhabits the mountainous parts of the deſerts of *Tartary**; but is not found farther north than the forty-eighth degree of latitude. In ſummer, theſe animals appear in vaſt herds, in the neighbourhood of the lake *Aral*; but in winter, they retire to the warmer climate of *India*. *Barboga*, quoted by Dr. *Pallas*, relates, that they penetrate to the mountains of *Malabar* and *Golconda*. *Perſia*, however, is their favourite winter retreat; and they are found, through the whole year, on the mountains of *Caſbin*. The deſerts in the north of *Africa* are ſaid to afford wild aſſes of an aſh-colour. Anciently theſe animals were likewiſe found in *Lycaonia*, *Phrygia*†, *Meſopotamia*, *Sileſia*, and *Arabia Deſerta*.

The *koulan* is remarkably wild. The *Perſians*, however, deceive theſe animals into pits, and by that means take them alive. They afterwards break them for the draught and the ſaddle; and value them highly for both theſe purpoſes. The breed of tame aſſes is improved by intermixture with theſe. The *Romans* eſteemed the progeny of the *Onager* copulating with the tame aſs, by far the beſt. This animal is mentioned in the book of *Job*, as remarkable for its wild, impetuous, untameable ſpirit. Like the wild horſe, and the *Dſhikketei*, this ſpecies aſſociate in herds, under a leader, and are very ſhy.

They

* Bell's Travels, I. 256. † Plinii Hiſt. Nat. Lib. VIII. c. 69.

They ſometimes, however, ſtop when running, in the midſt of their carreer, and ſuffer a perſon to approach them; but before they can be caught, ſuddenly ſtart away, with great velocity.

The *Tartars*, and even the *Perſians*, eſteem the fleſh of the wild aſs a great delicacy. The former watch, and ſhoot it, when it goes to drink in the ponds of brackiſh water, in the deſerts; for it prefers ſaltiſh to freſh water, and is even fondeſt of ſaline, and bitter milky plants. Its extraordinary ſwiftneſs, for which it has always been celebrated, renders it almoſt impoſſible to take or kill it, by any other arts except thoſe which the *Tartars* and the *Perſians* employ. The *Romans*, among their other delicate diſhes, were very fond of the fleſh of the young of this animal, which they called *Laliſio* * ; not leſs ſo, it would appear, than the *Perſians* and the *Tartars*.

IV. *Zebra.*

THIS ſpecies is deſcribed by Mr. *Pennant*, in his Hiſtory of Quadrupeds †, under the name of *Zebra*. The *French* hiſtorians, *Briſſon* and *Buffon*, call it *le Zebre*, or *L'ane rayè*; from *Linnæus* it has received the name of *Equus Zebra*; by *Kolben*, in his account of its native country, it is called the *wild-aſs*; and by the coloniſts at the *Cape of Good Hope*, *Sparrman* tells us, *wilde paarden*, or wild horſes.

It is nearly of the ſame ſhape and ſize with the common mule. Its tail, like that of the aſs, has long hairs at the extremity. The ſkin under the jaw, is ſaid by a perſon who had an opportunity of examining one of theſe animals in the Queen's *menagerie*, to hang looſe on the neck, in a manner which rather injures the general elegance of its appearance. Its mane is ſhort, and ſtands

* Plu. Nat. Hiſt. Lib. VIII. c. 69. † Goldſ. Hiſt. Anim. Nat. Vol. II, 398.

erect. The head, the neck, the mane, and the body, are ſtriped downwards, with lines of brown, on a pale buff ground, or with alternate black and white lines. Its legs and thighs are ſtriped acroſs, with the ſame colours. This arrangement of its colours is univerſally admired. Naturaliſts ſpeak of it with rapture; and call the animal, on this account, the moſt beautiful of quadrupeds. Yet, the taſte muſt ſurely be fantaſtic, that can prefer *ſtriping*, in a manner ſeemingly artificial, to the more ſimple colouring of the horſe and other animals more common among us. It is ſingular; and men have therefore fancied it beautiful. The males and females, excepting ſome trifling variations, which cannot ſerve to diſtinguiſh the ſexes, are coloured alike.

This animal is remarkably ſwift. *Kolben* aſſerts, that he is ſwifter than the horſe: but, a later obſerver of nature informs us *, that, with good horſes, zebras are eaſily hunted down. Their feet are ſmall, and their hoofs hard; ſo that they may be regarded as ſurer-footed than horſes. Mankind have not yet made many attempts to tame this animal; and ſuch as they have made have been unſucceſsful. *Sparrman* relates †, that a wealthy burgher of the *Dutch* colony near the *Cape* of *Good Hope*, took it into his head to yoke ſome zebras that he had brought up as tame as poſſible, in his carriage. This was the firſt attempt he made to yoke or harneſs them. The animals ran directly back into the ſtable, with the carriage, and their maſter in it, in ſo furious a manner, that neither he, nor any of his neighbours, ventured to repeat the experiment. The individuals of this ſpecies which have been brought into *Europe*,

* Sparrman's Voyage to the Cape of Good Hope, Engliſh Tranſ. Lond. 1785. Vol. I. p. 226, † I, 225.

Europe, are remarkably wild and vicious. *Goldſmith* mentions *, that one which he examined, appeared much alarmed, and prepared to kick, when he approached it. *Buffon* † informs us, that the zebra which he examined as the ſubject of his deſcription, was extremely wild when he was firſt introduced into the royal *menagerie*; and though great pains had been uſed to tame him, continued ſo unmanageable, that two men always held the bridle, while a third ſat on the animal's back. His ears were ſo exquiſitely ſenſible, that he kicked back whenever they were touched. *Pyrard*, quoted by *Buffon* ‡, relates, that, in *Brazil*, a zebra had been known to break looſe, and kill its keeper: yet zebras may hereafter, perhaps, be rendered as tame as horſes. Theſe animals are gregarious, and are ſeen in large troops §. Their ſkins are procured by the *European* furriers, and ſold by them, under the improper name of *ſea-horſe* hides ¶. Attempts have been repeatedly made to perſuade the zebra to copulate with the aſs. In France **, the experiment did not ſucceed: ſhe-aſſes excited no amorous emotions in the male zebra. At *London*, a little more art was uſed; and the female zebra was actually prevailed with to receive the embraces of the he-aſs. At firſt, ſhe refuſed them with abhorrence; but when the aſs was painted ſo as to reſemble herſelf, ſhe was no longer nice. A mule was accordingly produced ††; but which of the parents it chiefly reſembled, we have not been informed.

The zebra appears to be a native of *Africa*. The ſpecies abounds near the *Cape* ‡‡. They are found, likewiſe,

* Nat. Hiſt. II. 392. † Smellie's Buffon, VI. 271.

‡ Smellie's Buffon, VI. 270. § Sparrman, I. 130. ¶ *Id. Ibid.*

** Smellie's Buffon, VI. 265. †† Pennant's Hiſt. of Quad. I. 14.

‡‡ Sparr. *loc. jam cit.*

wiſe, between the *Cape* and *Ethiopia*. They are numerous in that country; and are alſo to be met with in *Congo* *, and in the tract between the *Cape* and *Congo*. They are not natives of any other part of *Africa*, or of *Europe*, *Aſia*, or *America*. They have been obſerved by travellers, indeed, in *Brazil*, and in *Perſia* and *Turkey*; but thoſe muſt have been tranſported thither from the countries of which they are natives.

V. *The Quagga.*

THIS ſpecies is called by Mr. *Pennant*, in his Hiſtory of Quadrupeds †, *Quacha*; by Mr. *Maſſon*, in the Philoſophical Tranſactions, *Opeagha*; and by *Sparrman*, *Quagga* ‡, the name here adopted. *Edwards* has miſtaken it for the female zebra.

The quagga nearly reſembles the zebra. It is of the ſame ſize; but its ears are ſhorter than that animal's; and it has no ſtripes on its fore legs, loins, or hinder parts §. The flanks are ſpotted; the rump uniformly coloured; and the belly, legs, and thighs are of a pure white.

Dr. *Sparrman* ¶ brought a full-grown fœtus of the quagga, ſtuffed with ſtraw, from the *Cape* to *Stockholm*, and depoſited it in the cabinet of Natural Hiſtory, belonging to the Royal Academy of Sciences of that city. The length of that fœtus was, he informs us, between the ears and the tail, thirty-one inches; and its height about the loins, twenty-two inches. Its colours appeared to be livelier than thoſe of the adult animal. A tame quagga, which the ſame traveller ſaw at the *Cape*, was ſo pleaſed with the familiarity of mankind, that, inſtead of

* Paterſon, p. 112, and 126. † I. 14. ‡ I. 223.
§ *Id. Ibid.* ¶ 224.

of ſhunning thoſe who approached it, it came up to receive their careſſes. The quagga is much more tractable than the zebra, and is even yoked by the coloniſts at the *Cape*, in teams, with horſes. It is remarkable of this animal, likewiſe, that notwithſtanding its being of a mild character, it is an overmatch for the hyæna; purſues that fierce creature whenever it makes its appearance; and protects the horſes with whom it aſſociates from the hyæna's violence, from which they would otherwiſe ſuffer. The quagga is like the zebra, a ſocial animal.

Section II.

Cloven-hoofed Quadrupeds.

These are either with, or without horns.

Genus II.—*The Ox.*

The characteriſtic marks of this genus are, horns bending out laterally; eight cutting teeth in the under, but none in the upper jaw; and the ſkin hanging down looſe, on the lower part of the neck.

Species I.—*The Bull.*

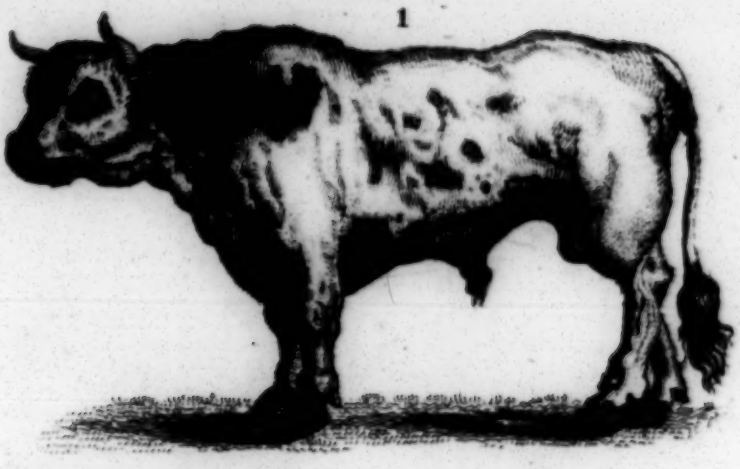
We uſe *Bull* as the ſpecific name of all thoſe cattle, tame or wild, of which the male is denominated, among us, in common language, *Bull*, the female, *Cow*.

Pennant adopts this name*; *Linnæus* calls the ſpecies *Bos Taurus*; *Buffon* names it *le Taureau*; and the ſpecific name uſed in *Smellie*'s tranſlation of *Buffon*, is *Ox*.

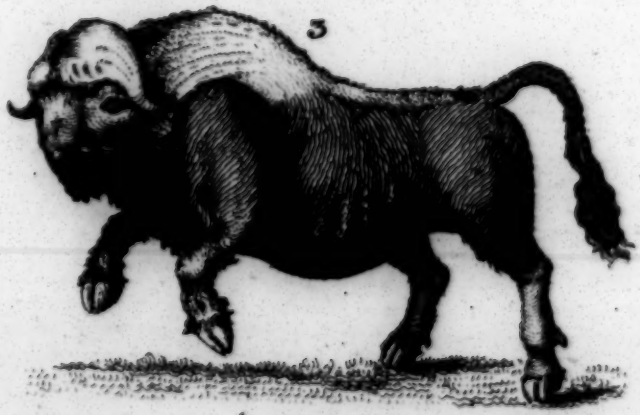
The horns of this animal are round and taper, with a large ſpace between their baſes; his back riſes in a narrow ridge; his ſhoulders are of conſiderable breadth; his neck thick; and his legs ſhorter, in proportion to the ſize of his body, than thoſe of the laſt genus of animals. Thoſe bulls are eſteemed the handſomeſt, who have black eyes, an open front, a bold aſpect, a ſhort head, thick, ſhort, and black horns, long, buſhy ears, a large

* Hiſt. of Quad. I. 15.

Plate II







1. BULL 2. ZEBU 3. AMERICAN BUFFALO

large mouth, a ſhort, ſtraight noſe, a thick neck, a broad cheſt, large ſhoulders, thick legs, and a long buſhy tail.

The colours of theſe animals are extremely various; they are reddiſh, black, white, grey, brown, dun, and ſpotted. The face is often marked with white, when the reſt of the body is of a different colour. Our cows and oxen, in *Britain*, are of a mixed race; we are continually croſſing the breed; and the varieties of ſhape and colour which they exhibit may probably be owing, in ſome degree, to theſe cauſes *.

The ox and the cow are among the moſt uſeful of the tame animals. The form, the patience, and the ſtrength

* The following beautiful lines deſcribe the form and colours which the ancients moſt admired in the cow.

Optuma torvæ
Forma bovis, cui turpe caput, cui plurima cervix,
Et crurum tenus a mento palearia pendent.
Tum longo nullus lateri modus; omnia magna:
Pes etiam, et camuris hirtæ ſub cornibus aures.
Nec mihi diſpliceat maculis inſignis et albo,
Aut juga detrectans; interdumque aſpera cornu,
Et faciem tauro propior, quæque ardua tota,
Et gradiens ima verrit veſtigia cauda.

VIRG. Georg. III. l. 51.

The mother-cow muſt wear a low'ring look,
Sour-headed, ſtrongly necked, to bear the yoke.
Her double dewlap from her chin deſcends;
And at her thighs the pond'rous burden ends.
Long are her ſides, and large; her limbs are great;
Rough are her ears, and broad her horny feet.
Her colour ſhining black, but fleck'd with white;
She toſſes from the yoke; provokes the fight:
She riſes in her gait, is free from fears,
And in her face a bull's reſemblance bears:
Her ample forehead with a ſtar is crown'd;
And with her length of tail ſhe ſweeps the ground.

DRYDEN.

of the ox, fit him for drawing in the plough and the team. * The *Hottentots* honour him with the saddle. When mounted on his back, they manage him by a rope fastened to a wooden pin, which passes through a hole bored in the gristle of the nose; by this means the ox is as effectually restrained and guided, as horses by a bridle with bits. *Sparrman* relates, that a *Hottentot*, who was fond of hunting, trained an ox to such extraordinary speed, that he wearied out, and ran down elks upon him. The milk of the cow is a very nourishing article of food. Cream, cheese, butter, butter-milk, whey, and sugar of milk, are so many valuable preparations from this fluid. Through a great part of the world, the flesh of these cattle is the principal article of animal food that mankind use. It is prepared into a vast variety of dishes. The skins of this species are manufactured into leather for shoes, boots, and many other purposes. The dung is an excellent manure for dry, light soils. The horns appear to have been used, in ancient times, for drinking vessels; as instruments for augmenting sounds; and in windows and lanthorns, for the same purposes as glass, before that manufacture was invented. They are now made into spoons, boxes, combs, and other articles of use or ornament. The blood is the most essential article in the preparation of *Prussian* blue: and even the bones are applied to various uses.

The calf is more perfect and vigorous at its birth, than the young of many other animals. Yet, like other young animals, it needs to be for a considerable time under the care of the mother. For the first five or six days after birth, it should never be separated from her. At this age, however, it ought to be removed, that it may not exhaust her by constant sucking. Calves, whether intended

* Sparrman, I. 237.

intended to be ſold to the butcher, or to be brought up, are uſually confined, for a few weeks after their birth, from the open air. In the courſe of eight or ten weeks, thoſe which are fatted for the market are ready for ſale. Beſides being permitted to ſuck twice or thrice a-day, to fatten them quickly, they may be fed with raw eggs, and boiled milk and bread. In ſome places, calves, whether deſigned to be killed young, or to be brought up, are not ſuffered to ſuck the mother, but fed with milk, in a diſh. Calves brought forth in April, May, and June, commonly thrive beſt. Like other young animals, healthy calves teſtify, by a variety of ſportive gambols, the pleaſure which they derive from the conſciouſneſs of exiſtence, and freedom from diſagreeable ſenſations.

It is well known that theſe animals eat only vegetable food. Green, ſucculent graſs, hay as a ſubſtitute for that, potatoes, turnips, and grain, are the food on which they are uſually nouriſhed. They are alſo fond enough of the leaves and ſprouts of trees. In *Iceland*, and even in *Norway*, cows and oxen are fed on boiled fiſh; and they are even ſaid to be fond of this ſpecies of food.

The male calves, except ſuch as are deſigned for bulls, are caſtrated, either ſoon after birth, or, at leaſt, before the age of puberty; which is either at eighteen months, or earlier, and ſcarce ever later than two years from the birth of the animal. Sometimes, both bulls and cows are capable of procreation much ſooner. One bull is able to impregnate a great many females: Therefore, as the fleſh of the bull is much inferior to that of the bullock, as he is more ferocious and unmanageable, and incapable of the ſame patience and ſubmiſſion, only a very ſmall proportion of male calves are ſuffered to retain their powers of propagation.

Cows uſually deſire the male in ſpring; between the fifteenth of *April* and the fifteenth of *July*. Their period of geſtation is nine months. About ſix weeks or two months before the time of bringing forth, it becomes improper to milk them. From that time, the whole of the milk is requiſite for the nouriſhment of the fœtus; and its qualities are, beſides, ſo much changed, that it is no longer equally fit for any other uſe. Some cows yield no milk from about that period till after delivery. The ſtrength of the cow is much exhauſted upon this occaſion: ſhe needs to be carefully tended; to be laid on ſoft and freſh litter; and to be fed, for ten or twelve days, with bean-flour, or oat-meal, diluted with warm water.

Theſe animals are in their greateſt vigour between the age of three and that of nine years. After the age of nine, they ought to be fattened for ſlaughter. At two years they attain their full growth; and the natural term of their life is fourteen years.

Theſe animals are patient and peaceable; neither remarkably ſtupid, nor eminent for docility; affectionate to their young; and even capable of ſome degree of attachment to thoſe who uſe them kindly. Bulls are ſometimes ſo ferocious as to attack, even unprovoked, people who paſs near them; but the cow and the bullock are never troubleſome in this way, unleſs they have been very improperly managed. The natural character of all ruminating animals is evidently mild and pacific. They are not armed with tuſks or claws. Their viſcera are formed for the reception rather of vegetable food, which muſt paſs through a long proceſs before it can be converted into aliment, than of animal food, which is more ſpeedily digeſted.

They are liable to ſeveral diſeaſes. There is one which they ſometimes bring upon themſelves, by ſwallowing hairs

hairs when they lick their bodies. Thoſe hairs being indigeſtible, remain in the ſtomach undiſſolved, and are there united by a mucilage into hard and ſolid balls, which impede digeſtion, and injure the digeſtive powers.

There are a good many varieties belonging to this ſpecies. Even in the herds through *Great Britain*, ſeveral of theſe may be found. The *Highlands* of *Scotland* afford a ſmall breed, many of which are without horns. When we ſee the ſame mother produce ſometimes horned calves, and ſometimes calves without horns, we are tempted to conſider the having or wanting horns as circumſtances merely accidental. But more careful obſervation ſhews, that this is by no means the caſe. Horned and hornleſs cattle are diſtinct races: were the breed never croſſed, the progeny of horned parents would, moſt probably, be always horned; and the calves produced from bulls and cows wanting horns, would, in the ſame manner, be invariably hornleſs. The *Welſh* cattle *, and thoſe of *Cornwall*, are of a larger ſize, and plainly a race diſtinct from thoſe of the *Highlands* of *Scotland*. Thoſe of *Lincolnſhire* appear to have been introduced from *Holſtein*†. In ſome parts of *England* there are a large breed of hornleſs cattle, originally from *Poland*.

In ancient times,—between two and three hundred years ago,—*Scotland* afforded a race of wild cattle. *Hector Boece* tells us, they were milk-white, and had manes like lions. *Boece* is a writer of ſuſpicious credit; yet, a variety of this ſpecies, with manes, called by the ancients *Bonaſus*, and *Biſon jubatus*, is well known to have been once ſcattered over the north of *Europe*. *Pliny* aſcribes the *biſons jubatus* to *Scythia*‡. The *bonaſus* he repreſents as a different animal, and a native of *Pæonia*§: But, even

* Pennant's Brit. Zool. Vol. I. p. 21 † *Id. Ibid.*

‡ Nat. Hiſt. Lib. VIII. c. 15. § Nat. Hiſt. Lib. VIII. c. 16.

even from what he himſelf ſays, it appears pretty evident that the *bonaſus* and *biſons jubatus* were the ſame. It is not improbable that the ſame variety might alſo inhabit *Scotland*. Large horns are ſtill found in different parts of the kingdom, which appear to have belonged to ſome animals of this kind. They are ſometimes found at a conſiderable depth in the earth, among ſtrata of marl and other ſubſtances. In the parks of *Drumlanrig*, in the ſhire of *Nithiſdale*, and in thoſe of *Chillingham* in *Northumberland*, Mr. *Pennant* * tells us, he ſaw wild oxen, entirely white. They were without manes: but, notwithſtanding this want, that ingenious naturaliſt conjectures them to be the progeny of the old *biſontes jubati*. The mane, he thinks, may have been accidentally loſt. This conjecture, however, is not very plauſible. If the breed has remained unmixed, and the climate and the nature of the country have not ſuffered any very remarkable change, what other accident can have affected theſe cattle to ſuch a degree as to deprive them of their manes?

Other old writers mention a different race of wild cattle, white, but without manes, as inhabitants of *Scotland*. Thoſe of *Drumlanrig* and *Chillingham* are, more probably, *their* deſcendants.

The *Aurochs* of the modern *Germans*, the *Urus* of *Cæſar* † and *Pliny*, was well known in ancient times, as an inhabitant of the *Hercynian* foreſt. *Cæſar* deſcribes this animal as little inferior to the elephant in ſize; in ſhape and colour like a common bull; of amazing ſtrength; ſo ferocious as to attack, even unprovoked, people who approached it; and abſolutely untameable. Their horns, which were large, were often hooped with ſilver,

* Tour through Scotland. Hiſt. of Quad. Arctic Zoology.

† Cæſar de Bello Gallico, Lib. VI. c. 23.

ſilver, and uſed as cups. *Bell* * obſerved *aurochs* on the hills and in the woods near *Kuznetſky*, at the ſource of the river *Tomm*. He deſcribes them as ſuperior in ſize and ſtrength to all the reſt of the horned tribe; among the moſt ferocious animals that the world produces; and of ſuch force and agility, that no wolf, bear, or tyger, dare engage with them.

The *American Ox* of *Pennant* †, in his *Hiſtory of Quadrupeds*, and *Biſon* in his *Arctic Zoology* ‡, called in *Mexico*, *Cibolo* §, appears to be another variety of the ſame ſpecies; perhaps deſcended originally from the *biſons jubatus* of *Europe*. This animal's horns are black, ſhort, and round. His ſhoulders are loaded with a large bunch, which riſes to a conſiderable height. The fore part of his body is thick and ſtrong; the hinder part weak and ſlender. His legs are ſhort and thick; his tail is naked, but has a tuft of hair at the end. The head and ſhoulders of the *bull* are covered with long flocks of reddiſh, woolly hair, which hang over the eyes, and cover the horns to the points. Long ſhaggy hair hangs from the chin and the dewlap. In winter, the whole body is uniformly clothed; but, in ſummer, the hinder part is bare. The cow is ſmaller than the bull, and not arrayed in the ſame ſhaggy covering.

One of theſe animals has been ſometimes known to weigh ſixteen hundred, or even two thouſand and four hundred pounds. The moſt northern reſidence of this inhabitant of *America* is in the countries ſix hundred miles weſt of *Hudſon's Bay*. They are ſeen in large droves at *Cibole*, a little north of *California*; in *New Mexico*; in *Canada*, to the weſt of the lakes; and in the rich *ſavannahs* which lie along the river *Miſſiſipi*, and the other great rivers that fall into it. They feed promiſcuouſly

* Vol. I. 256. † Hiſt. of Quad. I. 19. ‡ Arctic Zool. Vol. I. p. 1.
§ Clavigero's Hiſt. of *Mexico*, Vol. II. p. 316. Eng. tranſ. Lond. 1787.

miſcuouſly among ſtags and deer. They appear in the plains in the morning and the evening;—but retire from the mid-day heats, among the reeds on the banks of the rivers. While unmoleſted, they are ſhy and timid;—but when wounded, turn furiouſly upon their purſuer, and attack him with dangerous impetuoſity. The ſavage hunters of *America* are very fond of purſuing theſe animals. They employ very ingenious arts to deceive the obſervation of the biſon, and elude his fury; and are accordingly very often ſucceſsful. The horns of the biſon are uſed for powder-flaſks. His ſkin, when properly dreſſed, makes excellent buff-leather. His fleſh, eſpecially the bunch on the back, is a delicate article of food. The tallow is a material of commerce. The hair or wool is ſpun into cloth, gloves, ſtockings, and garters. Sometimes theſe animals become unwieldy; and, being unable to keep up with their companions, fall a prey to the wolves. In herds, they diſplay great ſagacity in defending themſelves againſt the wolves. The acuteneſs of their ſmell enables them to diſtinguiſh the approach of theſe, or any other enemy, a conſiderable time before they can be attacked. The herd immediately forms itſelf into a circular body; the weakeſt in the middle,—the ſtrongeſt on the outſide. Their horns then preſent to the enemy an impenetrable front. When taken by ſurpriſe, many of the fatteſt and weakeſt muſt unavoidably periſh. No attempts to domeſticate theſe cattle have as yet ſucceeded. They produce, by copulation with tame bulls and cows, animals capable of propagating their kind.

The great *Indian* ox is another variety of this ſpecies. Its horns are ſhort, and bend backwards, cloſe to the neck; its ſhoulders are loaded with a large lump, the fleſh of which is very fat and delicious; its hair is of a reddiſh

reddiſh colour. When the breed is croſſed by intermixture with our common *Europēan* cattle, the lump diſappears in a few generations. *Madagaſcar* affords the ſame variety; and they grow there to an enormous ſize. *Pliny* mentions *Indian oxen*, of the ſize of camels, with horns four feet wide. He mentions alſo *Syrian* oxen, that wanted dewlaps, but had a bunch on the back.

India affords alſo another variety of this ſpecies; the *Bos Indicus* of *Linnæus*, and the *Zebu* of M. *Buffon*. It has a lump on the ſhoulders; but its horns are almoſt upright, only bending a little forward. It is uſed both as a beaſt of draught, and for riding. It is very mild and peaceful, and often diſplays a degree of affection to mankind *.

In *Abyſſinia*, there are two diſtinct races of oxen. One of theſe is deſtitute of horns, and is employed in bearing burdens; the others are remarkably large,—about twice as big as our common *European* cattle. The *Abyſſinians* fatten them with milk, and kill them for eating. Their horns are ſufficiently capacious to hold five gallons, and are uſed for pitchers †.

Adel or *Adea*, and *Madagaſcar*, are ſaid to afford ſnowy-white cattle, as large as camels, with pendulous ears, and hunch-backs. White cattle, with black ears, are aſcribed to the iſland of *Tinian*. The iſland of *Guam* affords cattle of the ſame appearance ‡. The *lant* or *dant* of *Leo Africanus* is, perhaps, of this ſpecies. Its hair, he informs us, is white; it reſembles the ox in ſhape, but

* Bell ſeems to hint, that this variety is known in *Perſia*, in the following words: "Beſides the cattle I have mentioned, there is another kind, "having a high riſing upon the ſhoulder, with clean limbs, which are very "handſome." Bell's Travels, Vol. I. p. 143.

† Lobo's Voyage, tranſlated by Dr. Johnſon, Lond. 1789, p. 70.

‡ Nouveau Voyage a la Mer du Sud, p. 124. 8vo. Paris 1783.

has ſmaller legs, and comelier horns. Its hoofs are black. Targets, impenetrable by bullets, are made of its hide.

The cattle of *Holſtein* and *Jutland* are among the largeſt produced in *Europe*. Their paſture being very rich, they conſequently grow to an uncommon ſize; and the cows yield a great deal of milk. *Podolia* and the *Ruſſian Ukraine*, in the tracts adjoining to the rivers *Bog*, *Dnieper*, and *Dneiſter*, afford a fine breed, with large horns, and a duſky line along the back. Vaſt quantities of theſe cattle are annually ſold in *Germany* at a high price. The ſame breed abounds in *Hungary* *.

II. *The Grunting Bull.*

THIS animal ſeems to be, with ſufficient propriety, repreſented as a diſtinct ſpecies; although M. *Buffon* is unwilling to diſtinguiſh it from the *biſon*. From *Linnæus* it has received the name of *Bos Grunniens*; by others it is called *Vacca Grunniens*: *Buffon* has denominated it the *Cow of Tartary*†. *Bell*, in his Travels, mentions it under the name of *Bubal*‡; and Mr. *Pennant*, who is here followed, characteriſes it by the epithet *Grunting* §.

The Grunting Bull has a ſhort head, a broad noſe, and thick, hanging lips. His ears are large, covered externally with coarſe, briſtly hairs, and pointing downwards, but

* I add here, becauſe I did not receive the information early enough to inſert it in its proper place, that the white wild cattle which Mr. Pennant ſaw in the parks of Drumlanrig, are no longer to be found there. They have been partly killed, partly ſold off; and except one bull, now the property of Sir James Johnſtone, Bart. of Weſterhall, I know not that any of them ſurvives. That bull has been deſcribed to me, as having brown ears, and a ſmall white mane, and as remarkably ſhaggy on the fore parts of the body, but ſmooth behind.

† Smellie's Buffon, Vol. I. p. 225. 2d edit.

‡ Vol. I. p. 256. Edin. 1788. § Hiſt. of Quad, I. 20.

but not pendulous. His horns are ſhort, ſlender, round, upright, and ſharp-pointed, and bend inwards;—they are remote from each other at the baſes; and the hair forms a long curling tuft between them. The whole body is covered with long hair, much like that of an he-goat; and of ſo conſiderable a length on the inferior part of the body, as to cover half the legs. His hoofs are large; upon each of the hinder feet there are two tufts of hair,—one before,—the other behind; on each of the fore feet there is only one tuft, which is placed behind. The ſhoulders are loaded with a bunch. The tail is long and buſhy.

This animal is commonly black all over the body, except on the front, the mane, the ridge of the back, and the tail:—theſe parts are white. The horns of the tame animals of this ſpecies have been obſerved to vary in colour, from red to black; and to be ſometimes white as ivory. Some have no horns, but ſo thick a frontal-bone, that it is very difficult to knock them down with an ax.

The ſize of the grunting bull is differently repreſented by different writers. The *Ruſſian* naturaliſts, who have of late examined ſome individuals of this ſpecies, that were conveyed young from *Siberia*, and brought up in confinement, repreſent them as nearly of the ſame ſize with a common domeſtic cow; but *Marco Polo* and *Rubruquis*, travellers from the ſouth-weſt of *Europe*, who viſited *Tartary* in the thirteenth century, as well as Mr. *Bogle*, an *Engliſh* traveller, who lately obſerved theſe animals in *Thibet*, deſcribe them as conſiderably larger. Nay, *Marco Polo* *,—but he delights in wonders,—tells that he ſaw ſome of theſe animals in a wild ſtate, little inferior in ſize to elephants. *Bell* † repreſents

* See his Travels in Harris's Collection, Vol. I. p. 604. Lond. 1744.

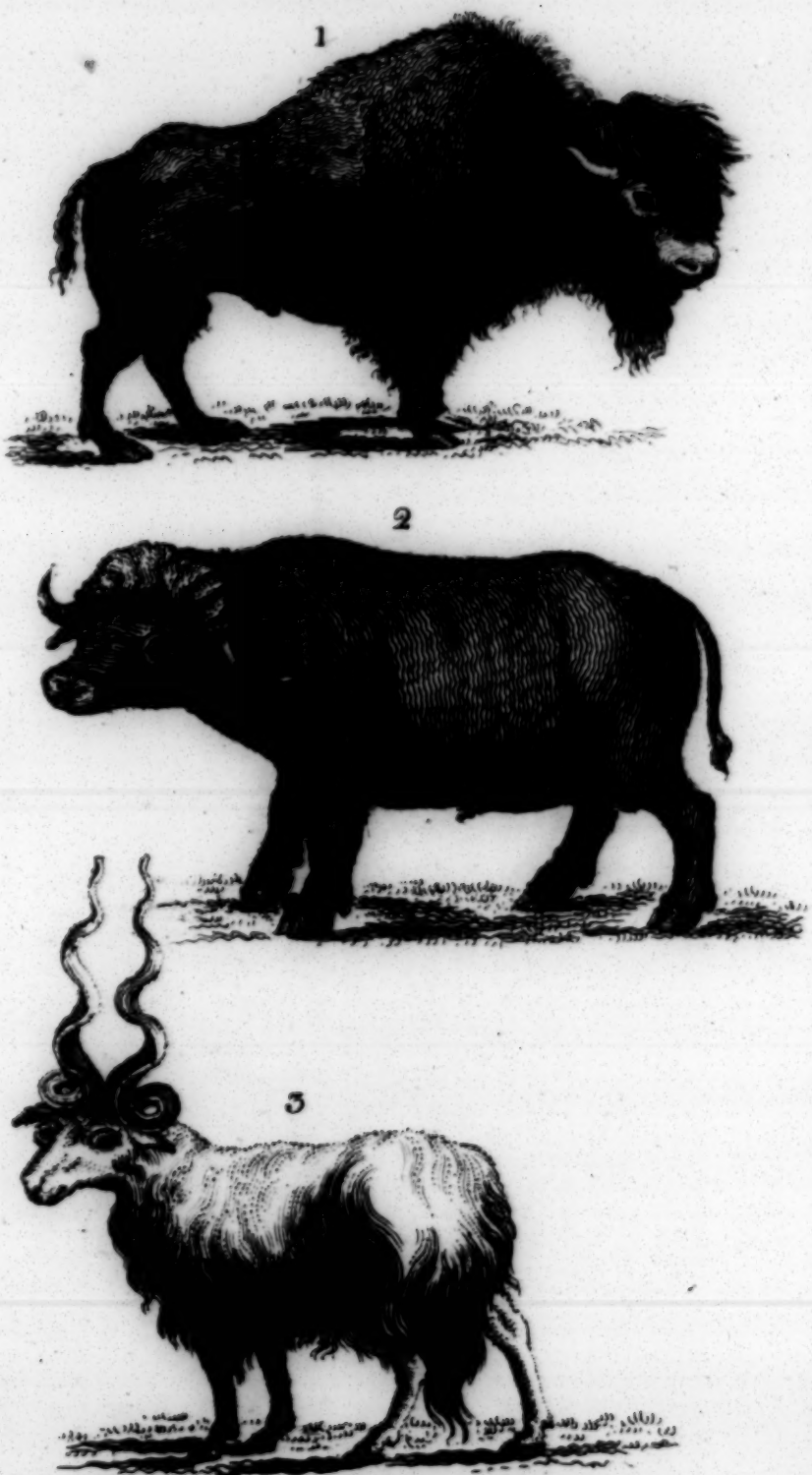
† Travels, I. 256.

ſents thoſe which he ſaw, in a tame ſtate, among the *Tartars*, near the ſource of the river *Tomm*, as leſs than the *aurochs*. A tail of one of theſe creatures in the *Britiſh Muſeum*, is not leſs than ſix feet long: and, as they are uſually delineated with the tail not reaching to the ground, an ingenious natural hiſtorian has inferred, that, at leaſt the individual to which that tail belonged, was probably much larger than the common cow. It appears difficult, therefore, to determine from the evidence before us, whether the ſize of this animal be naturally ſomewhat diminutive, or enormouſly large. There may, perhaps, be a larger and a ſmaller variety; but credit is undoubtedly due to the *Ruſſian* philoſophers, in preference to the credulous travellers of the the thirteenth century. They take notice of two varieties, one called in the *Mongal* language *Ghainouk*, the other *Sarlyk*; but theſe are not ſaid to be diſtinguiſhed by difference of ſize.

The voice of theſe animals is remarkable:—Inſtead of lowing, like the former ſpecies of this genus, they grunt like a hog. In their manner, they are ferocious. Though ſuſceptible of domeſtication, they retain, even in a tame ſtate, their natural ferocity. When red, or other gaudy colours ſtrike their eyes, they are inſtantly agitated with fury; their eye-balls glare; they raiſe and move their tails; and even ſhake the whole body. The wild breed, denominated *Bucha*, are very dangerous. If the hunter only wounds one of theſe, without killing him on the ſpot, he turns and purſues the aſſailant; and, if he overtakes him, raiſes him on his horns and toſſes him to death. The grunting bull refuſes not to copulate with our common cows. *Marco Polo* * relates, that when he viſited *Tartary*, this half-breed was yoked in the plough, and employed in bearing burdens. Even the

* Harris's Collect. of Voyages, ubi ſupra.

Plate III.



1 BISON 2 BUFFALO 3 WALLACHIAN RAM

the genuine breed were ſo tame as to ſubmit to draw the waggons of the wandering *Tartars*. The owners uſed to diſarm them, by cutting off the tops of their horns. The ſtomach of the grunting bull is ſaid to afford a bezoar highly eſteemed by the nations of the *Eaſt*; but the tail is ſtill more valuable. It is one of the chief articles of commerce which *Thibet* affords. Mounted on a ſilver handle, it forms the *chowraw* or fly-bruſh, ſo neceſſary, and ſo generally uſed through *India*. People of faſhion, both when they walk abroad, and when they appear in ceremony at home, are conſtantly attended by two ſervants, with bruſhes of this kind,—*chowrabadars*, —whoſe buſineſs is to drive away the flies. The tail of this animal is alſo faſtened, as an ornament, to the ear of the elephant. The *Chineſe* adorn their bonnets with tufts of the hair which it affords, dyed red. With the *Mongals*, and with moſt of the other *Eaſtern* nations, the cow is an object of worſhip; and, accordingly, this animal is often reſpectfully mentioned in their ſacred books.

Aelian, amid the many incredible ſtories which he relates, mentions and deſcribes this animal as a native of *India*, under the name of *Poephagus*. He repreſents it as larger in ſize than a horſe, poſſeſſed of a thick tail conſiſting of very fine hairs, amazingly ſwift, and extremely timid. Its tail, he farther tells us, was uſed as an ornament by the *Indian* ladies; and ſo ſenſible was the animal of the value of its tail, that, when purſued, and nearly overtaken, it uſed to hide its hinder parts in ſome buſh, and face its purſuers; imagining, that when the part for which they chiefly valued it was concealed, they would paſs without injuring it. The *Indian* hunters, according to this writer, uſed to ſhoot this animal with poiſoned arrows; and, neglecting the carcaſe, took only the hide and the tail.

III. *The*

III. *The Buffalo.*

THIS animal is deſcribed by *Ariſtotle* as a wild ox, known among the *Arachotæ;* it appears to be the *Bos Indicus* of *Pliny;* by *Buffon* it is called *le Buffle;* and by *Pennant*, as well as by the tranſlator of *Buffon*, *Buffalo.*

The buffalo is conſiderably larger and ſtronger than the ox. His horns extend for a conſiderable length in an horizontal direction from their baſes, and then bend upwards: They are not round, but flattened; and on one ſide ſharp. His ſkin is black; his hair thin and ſhort; his tail bare; and his forehead adorned with a tuft of curling hair. The body of the buffalo is thicker and ſhorter, his legs longer, and his head ſmaller in proportion to the ſize of his body, than that of the ox; his ears are alſo larger, and his ſkin thicker and harder. His eyes are white; his noſe broad and ſquare; and he has no dewlap. His body is of a ſquare form; his tail ſhorter and more ſlender than that of our common cattle. The horns of theſe animals are ſometimes amazingly large. In the *Britiſh Muſeum* there is one, ſix feet ſix inches and an half long, weighing twenty-one pounds, and ſufficiently capacious to hold five quarts.

The buffalo exiſts both in a tame and a wild ſtate. The wild buffalo is very fierce and dangerous, if attacked. He is afraid of fire, and even provoked at the ſight of any thing that is red-coloured. He delights to wallow in mud, is fond of the banks of rivers, and is an excellent ſwimmer.

Even the tame buffalo is a violent and intractable animal; next to the hog, the dirtieſt of domeſtic animals; ungraceful in his appearance, and awkward in his motions.

tions. His voice is deeper and ſtronger than that of the bull; and his bellowing hideouſly frightful.

Notwithſtanding the general reſemblance which the form of the buffalo bears to that of the common ox, yet the ox and the buffalo are diſtinct ſpecies. They refuſe to copulate together: the female buffalo will not ſuffer a common calf to ſuck her, nor will the cow ſuckle a young buffalo: the female buffalo goes twelve months with young; our cows only nine.

The milk of the buffalo, though conſiderably inferior in quality to that of the cow, is uſed for the ſame purpoſes: in thoſe countries in which the ſpecies is domeſtic, it affords a great deal of cheeſe. The fleſh of this animal is alſo eaten; but it is black and hard, has a diſagreeable taſte, and a more diſagreeable ſmell. The only part that can be called good eating is the tongue. The ſkin is more valuable than the fleſh; it is ſolid, pretty flexible, and almoſt impenetrable; and is accordingly prepared into excellent buff. The horns are employed in various manufactures. The ſtrength and ſize of the buffalo render him ſuperior to the ox as a beaſt for the draught. A ring, paſſed through his noſe, enables the driver to manage him. He carries his head and neck low; and of conſequence the whole ſtrength of the body is employed in drawing. Theſe advantages of ſize and carriage are ſo conſiderable, that two buffaloes will draw as much as four ſtrong horſes.

The buffalo is a native of the warm climates. Theſe animals abound in *India*, *Abyſſinia*, *Egypt*, in the neighbourhood of the *Cape of Good Hope*, and in *Italy*. They exiſt in a wild ſtate in *Malabar*, *Borneo*, and *Ceylon*. The negroes of *Malabar*, and of *Guinea*, where they are alſo numerous, are fond of hunting them. They mount a tree,

a tree, or hide in a thicket, and ſhoot the buffalo as he paſſes.

In *Abyſſinia*, the buffalo grows twice as large as our ox. On account, as well of his enormous ſize, as of the thickneſs and blackneſs of his ſkin, he has there obtained a name ſignifying *taurelephas*.

In *India*, the tame buffalo is more peaceable and tractable than in any other country. In *Egypt* too, this animal is ſufficiently manageable.

In the neighbourhood of the *Cape*, droves of wild buffaloes are frequently met with. Theſe form a particular variety of this ſpecies, and were firſt deſcribed and delineated by Dr. *Sparrman*, in the *Swediſh Tranſactions*, under the name of *Bos Caffer*; and in his Travels*, under the common name. By former natural hiſtorians, they had ſcarce been noticed. The animal from which *Sparrman*'s deſcription was taken, was eight feet in length, and five feet and an half high; its fore legs two feet and an half long; its larger hoofs five inches in diameter; and the head, between the tip of the muzzle and the baſes of the horns, twenty-two inches. In ſhape, it bore a conſiderable reſemblance to the common ox; but its limbs were ſtouter, and its fetlocks hung nearer the ground. The baſes of the horns were thirteen inches broad; and the ſpace between them not more than an inch. That ſpace forms a ſort of narrow channel or furrow, almoſt deſtitute of hair. The horns riſe up, in a ſpherical form, to the elevation of about three inches. They extend from the nape of the neck to within three inches and an half of the eyes. Their circumference is, of conſequence, not leſs than eighteen or twenty inches. They bend down on each ſide of the neck; and, becoming gradually cylindrical, form each a curve, the convex part

* Vol. II. p. 61.

part of which is turned towards the ground, and the point riſes up in the air, with a ſlight inclination backwards. The diſtance between the points of the horns is often above five feet; their colour black; and two-thirds of the ſurface, meaſuring from the baſe, rough and irregular, with cavities—ſometimes an inch deep. The ears are a foot in length, rather pendent, and generally notched on the edges, and ſhrivelled up in a ſingular manner. Some of the *Hottentots* fancy, that the buffaloes whoſe ears are thus notched, are marked out as the property of ſome ſupernatural beings. The hair of this buffalo is of a dark brown colour, and very thin; on ſuch of the males as are old, particularly ſo about the middle of the ſides and of the belly. The thinneſs of the hair on this part makes thoſe old males appear, from a diſtance, as if they were girt with a belt. The orbits of the eyes are prominent, and the eyes ſomewhat ſunk within them. This hollowneſs of the eyes, their ſituation almoſt under the baſes of the horns, and the inclined poſition in which the animal generally holds its head, give it a fierce and treacherous aſpect.

Theſe animals are remarkably ferocious. Unleſs previouſly irritated, they ſeldom attack either mankind or other animals; but they are ſo eaſily irritated, and ſo very ſtrong, that it is always dangerous to meet them unprepared. A perſon who accompanied the celebrated *Swediſh* naturaliſt *Thunberg* into the diſtrict of *Houtniquas*, in the neighbourhood of the *Cape*, happening to drive before him, on a narrow path, two of his horſes tied together, they were met by a buffalo, who gored the horſes to death, and trampled them under his feet; while their owner with great difficulty eſcaped his fury. The character of this buffalo is alſo diſtinguiſhed by that treachery which is indicated in his countenance. He is

accuſtomed to hide among the trees, and there wait to attack the paſſenger. Nay, he diſplays peculiar cruelty; for after throwing down and killing the perſon whom he has attacked, he tramples upon the body, cruſhes it with his knees, tears it to pieces, mangles it with his teeth and horns, and ſtrips off the ſkin, by licking it with his tongue. He, however, leaves the carcaſe, and returns upon it ſeveral times, before mangling it ſo entirely. Notwithſtanding his ferocity, the buffalo is there regarded as an object of the chace: but the hunter who attacks him needs to be well mounted; for he often turns upon his purſuer and attacks him with impetuoſity. It is not eaſy to eſcape, unleſs by riding up ſome hill, which the bulk of the buffalo, and the ſhortneſs of his legs, render him unable to aſcend with the ſame ſpeed as a good horſe. Theſe buffaloes appear to be of a very hot conſtitution: they delight to wallow in the mire; and when heated in hunting, plunge eagerly into the firſt ſtream or pool, or piece of water, of whatever kind, whether ſalt or freſh, which they happen to approach. Various attempts have been made to tame theſe wild buffaloes; but it can ſcarce be ſaid that any of them have ſucceeded.

The buffalo is alſo an inhabitant, or, at leaſt, an occaſional viſitant of the *Gold Coaſt* of *Guinea* *. *Boſman* relates, that theſe animals are found all over *Guinea*; but in ſuch ſmall numbers, that one of them is ſcarce to be ſeen in three or four years. On the *Slave Coaſt* †, they are ſometimes found in great numbers. Thoſe in this tract of country appear to be of the ſame form and character with thoſe in the neighbourhood of the *Cape*. They are of a red colour. *Boſman* mentions that thoſe which he

* Boſman's Deſcription of the Coaſt of Guinea, p. 234. Eng. Tranſ. Lond. 1726.

† *Idem*, p. 385.

he ſaw, though very ſwift, had the appearance of being lame.

In the large iſland of *Sumatra* *, in the *Eaſt Indies*, the buffalo, called by the natives *carbow*, is the principal domeſtic animal. The buffalo of that iſland ſeems to poſſeſs ſome peculiar characteriſtics, and muſt therefore be regarded as a diſtinct variety. Like the other buffaloes that have been already deſcribed, the buffalo of *Sumatra* has a large, heavy body, ſhort legs, and large hoofs; its horns turn backwards, but ſometimes point forwards, and are always in the plane of the forehead. The tail is ſlender, reaches only to the middle joint of the leg, and terminates in a bunch of hair. The organ of generation in the male appears as if the extremity were cut off. The female goes nine months with calf; and ſuckles her calf for ſix. When croſſing a river, ſhe carries her young on her back. The voice of the animal is a weak, ſharp cry, very unlike the lowing of oxen.

Theſe buffaloes, as well as thoſe of other countries, delight to roll in mud and water. They diſplay great dexterity in throwing the water with the horn over their back and ſides, when there is not ſufficient depth to cover them. The mud, mixed with the water, forms a cruſt on their ſkins, by which they are preſerved from the ſtinging of inſects; which, on account of the thinneſs of their hair, muſt otherwiſe prove very troubleſome to them. Their proprietors light fires at night, to afford them an opportunity of drying the mud on their bodies, by expoſing themſelves to the ſmoke.

Even of theſe *Sumatran* buffaloes there are two varieties, the white and the black. Both are employed in labour; but the white are ſcarce ever killed for food.

* Marſden's Hiſt. of Sumatra, p. 94. Lond. 4to 1783.

Different reaſons have been aſſigned for this exemption: Some of the natives ſay, that the white are ſuffered to live uninjured, becauſe they are accounted ſacred; others ſay, that the only reaſon is the inferior quality of their fleſh.

In *Sumatra*, the buffalo diſplays conſiderable docility and addreſs. It is taught to lift the ſhafts of a cart with its horns, and place the yoke fixed to them acroſs its own neck. The reſt of the harneſs conſiſts of a breaſt-band, and a ſtring paſſing through the cartilage of the noſe. This animal is not capable of undergoing much fatigue: any extraordinary exertions, eſpecially in the heat of the day, are likely to put an end to its life. The female buffalo affords better milk than the cow of *Sumatra*, but that not in ſo large a quantity.

Wild buffaloes are alſo known in the ſame iſland. They are conſidered, not as an originally wild breed, but as ſtray cattle, and are therefore diſtinguiſhed by the name of *carbow gellan*. They are gregarious; and it is remarkable, that in herds they are not ſo ready to attack the paſſenger as when met ſingly. Like the turkey, they diſcover an antipathy at red colours. They are as ſwift in running as an ordinary horſe. When alarmed or attacked, they flee for a ſhort diſtance;—then face about, and form into a regular body;—and, when the cauſe of their apprehenſions advances nearer, again take to flight: Thus they alternately retreat and face about till they gain ſome place of ſecurity. Among the inhabitants of the foreſt, the tyger is their principal enemy; but only the females and the weaker males fall a prey to his rapacity.

An animal of this ſpecies *, but almoſt naked, and conſiderably ſmaller than thoſe which have been deſcribed, was,

* Pennant's Hiſt. of Quad. Vol. I. p. 26.

was, a number of years ago, exhibited in *London*, under the name of *Bonaſus*. Its rump and thighs were quite bare; the hairs, thinly ſcattered over the reſt of the body, were briſtly: the rump was marked with two duſky ſtripes, pointing downwards;—the thighs with two tranſverſe ſtripes: its horns were compreſſed ſideways, taper, and ſharp at the points. It was ſaid to come from the *Eaſt Indies*.

In the *Celebes*, there is an animal of the ſize of a middling ſheep, which appears to be a variety of the buffalo. It is called *Anoa;* is a gregarious animal; and is found in ſmall herds on the mountains of thoſe iſlands—which abound in caverns. It is exceedingly difficult to take any of theſe creatures; and even in confinement, they are ſo remarkably fierce as to rip up the bellies of ſtags kept in the ſame paddock.

Ceylon affords a peculiar ſort of an ox, which may, perhaps, be referred to this ſpecies. Its back ſtands up in a ſharp ridge; its legs are white half way up; and it is called the *Gauvera*. Mr. Pennant mentions his having received information that there are hunch-backed oxen in that iſland; and thinks theſe the animals intended in the above deſcription.

IV. *Muſk Bull.*

THIS animal, which is only mentioned by *Buffon* * as having a ſtrong ſmell of muſk, and as being on account of that quality diſtinguiſhed by moſt travellers under the name of *muſk ox*, is conſidered by Mr. *Pennant* †,—with ſufficient propriety, it would appear,—as a ſeparate ſpecies.

The

* Smellie's Buffon, Vol. VI. p. 191, 2d edit.

† Hiſt. of Quad. Vol. I. p. 27. Arctic Zool. I. 8.

The horns of the muſk bull ſeem * almoſt to join at the baſe: as they riſe, they bend inwards and downwards for a great part of their length; but near their termination, turn outwards. Near the baſe, the horn meaſures two feet round; it tapers towards its extremity, and is ſharp at the point. Meaſured along the curvature, its length is only two feet. The head and body of this animal are covered all over with dark red ſilky hairs, which are ſo long as to trail on the ground, and hide the proportions of its ſhape. Its ſhoulders riſe in a lump; and its legs and tail are very ſhort: It is not ſo tall as a deer; but its body is more bulky.

The following more accurate deſcription of a *cow* of this ſpecies, I borrow from Mr. *Pennant* †, who formed it from a complete ſkin, which he was lucky enough to obtain.

The noſtrils are long and open; the two middle cutting teeth, broad and ſharp edged; the three on each ſide of theſe, ſmall and truncated. The lips are covered with ſhort white hairs on the fore part, and with pale brown hairs on the ſides. The hair extending down the middle of the forehead, is long and erect; that on the cheeks and the throat, long and pendulous, ſo as to form a long beard. On the neck, the ſides, and the rump, the hair depends in the ſame manner, and reaches nearly to the ground. Between the hinder part of the head and the ſhoulders, there is a thick upright mane of very long, ſoft hair. Between the baſes of the two horns the hair is partly white, partly of a light ruſt-colour; the mane, which extends to the middle of the back, but becomes gradually narrower towards that part, is a reddiſh dun. On the middle of the back is a large roundiſh bed of hairs, only three inches in length, and entirely white upon

* Voyages au Nord. T. III. 319. † Arctic Zool. I. 8.

upon the ſurface; but near the roots, of a pale brown colour. The hairs upon the other parts of the body are entirely black. The black hair is the longeſt, meaſuring not leſs than ſeventeen inches. That between the horns, with the mane, running to the middle of the back, is finer and ſofter than any human hair; and the white bed on the middle of the back is almoſt of the ſame nature as wool. Under the hair, all over the body, the animal is covered with aſh-coloured wool, moſt exquiſitely fine.

The length of the hide, from the noſe to the tail, is about ſix feet four inches. The head alone meaſures fourteen inches. The legs appear to be little more than a foot long. The horns are placed exactly on the ſides of the head; they are of a whitiſh colour; the ſpace between them is nine inches; the length of the horn is thirteen inches and an half; at the baſe it is eight inches and an half round; it is bent the ſame way as that of the bull. The ears are three inches long, and ſtand erect; they are ſlender and even, ſharp at the points, but broad in the middle; they are covered with a thick lining of duſky hair, marked with a white ſtripe. The hoofs are ſhort, broad and black; the falſe hoofs large in proportion to theſe. The tail is a mere ſtump, three inches long, and concealed by very long hair.

Theſe animals are confined within a not very extenſive tract in *North America*. They appear little farther ſouth than in the country between *Churchill* river and the river of *Seals*, on the weſt ſide of *Hudſon's Bay*; from thence they inhabit to the latitude of 73° north, beyond which the human inhabitants of thoſe regions have not penetrated. They are moſt numerous between the latitudes 66° and 73°. They are alſo found in the land of the *Cris* or *Criſtinaux* and the *Aſſinipoels*, as well as among the *Attimoſpiquay*, a nation ſuppoſed to inhabit about

about the head of the river of *Seals*, probably at no great diſtance from the *South Sea*; and it appears that they extend ſouthwards, even to the provinces of *Quivera* and *Cibola*. Some ſkulls of animals of this ſpecies have been found on the moſſy plains near the mouth of the river *Oby*, near *Siberia*: But as the ſpecies is not known to inhabit that country at preſent, it has been conjectured that the carcaſes to which theſe ſkulls belonged, may have been floated on maſſes of ice from *America*;—or the ſpecies may have been once common to both *Aſia* and *America*.

Theſe animals ſeldom viſit tracts of wood, but delight in rocky barren mountains. They run ſwiftly, and diſplay great dexterity in climbing rocks.

They are ſhot by the *Indians* for their fleſh and ſkins. The fleſh taſtes ſtrongly of muſk;—and the heart particularly is ſo much infected as to be ſcarce eatable. The reſt of the body, however, is very wholeſome food. The *Indians* uſe the ſkins as blankets: They alſo diſpoſe of both the fleſh and ſkins at the forts of the *Europeans*; bringing them down every winter in conſiderable quantities. The hair is ſo amazingly fine, that ſtockings have been made of it finer than ſilk *.

V. *Dwarf Bull.*

THIS ſpecies, though it has attracted the notice of different natural hiſtorians, is but very imperfectly known. Its form has been deſcribed; but with its character we are unacquainted. Nay, we ſcarce know of what region of the earth it is a native. The few particulars of its hiſtory that are related by natural hiſtorians, were originally

* Relation de la Baye de Hudſon, par M. Jeremie, imprimé dans le Recueil de Voyages au Nord, T. III. p. 314, Amſt. 1733.

ginally communicated by the *French* traveller *Belon*, who ſaw an individual of the ſpecies at *Cairo*.

Its horns recede in the middle; almoſt meet at the points; and ſtand erect. It is, in ſize, between the roe-buck and the ſtag. Its limbs are well ſhaped, and duely proportioned. Its hair is of a tawny brown colour, and gliſtering. Its legs are ſhort; its limbs thick; and its ſhoulders a little elevated. The end of its tail is adorned with long hairs, twice as coarſe as the hairs of a horſe's tail.

Belon relates, that the animal of this ſpecies which he ſaw was brought from *Aſamie* or *Azafi*, a maritime province of *Morocco*. Mr. *Pennant* * ſuſpects that it might be a variety of the *lant* of *Leo Africanus*.

Belon thought this the *bubalus* of the ancients. M. *Buffon* confounds it with the *zebu* or ſmall *Indian ox*.

* Hiſt. of Quad. I. 31.

Genus III.—*The Sheep.*

This genus is characteriſed by horns twiſted ſpirally, and pointing outwards; and by poſſeſſing eight cutting teeth in the lower, but none in the upper jaw. But, the firſt of theſe generic characters does not belong uniformly to all the ſpecies and varieties of the genus.

Species I.—*The Sheep.*

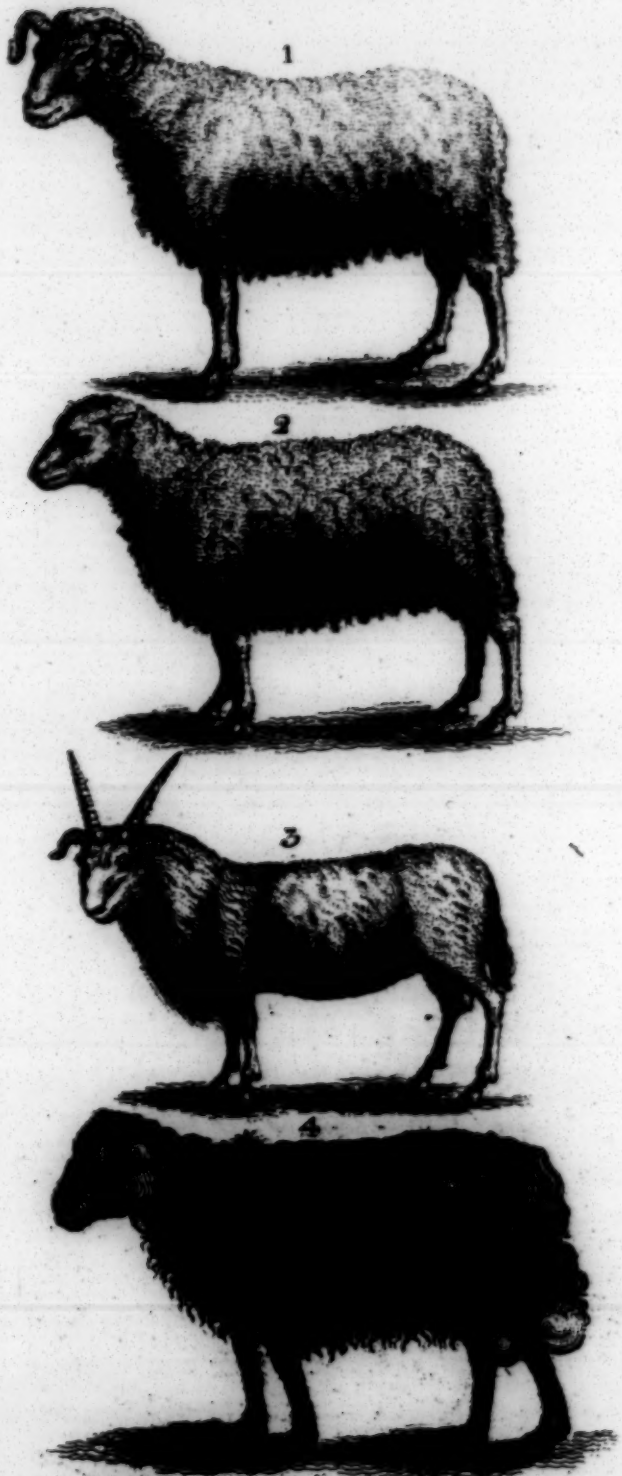
The common ſheep, with its varieties, diſperſed through different countries, is the moſt reſpectable ſpecies belonging to this genus. Perhaps none of all the domeſtic animals is ſo beneficial to mankind as the ſheep. Others may excel it in ſtrength, ingenuity, and dignity of character: but, were we to be deprived of the ſervices of any of our humble friends among the inferior animals, we ſhould probably find, that the ſheep could be leſs eaſily ſpared than any other.

From *Britiſh* naturaliſts, who have written in their native language, this animal has never received any other name than that by which it is commonly known. The *French* name is *la Brebis*; the *Latin* name *Ovis*; *Linnæus* uſes the names *Ovis Aries* *.

The ſize, ſhape, and fleecy covering of the common ſheep are well known. When its head is adorned with horns, they are moſt frequently twiſted outwards, in a ſpiral form. In the ram, horns are, by many, regarded as a mark of ſuperior ſtrength and vigour. That ram is eſteemed the beſt ſhaped, who has a thick head, a broad front,

* Syſt. Nat. I. 197. Lipſiæ, 1788.

Pl. IV. 1. RAM 2. EWE



3. MÁNY HORNED SHEEP 4. BROAD TAILED SHEEP

front, large black eyes, a broad noſe, a long, high body, a large crupper and large reins, maſſy teſticles, and a long tail. His colour ſhould be white; his fleece full and heavy. Thoſe ewes are preferred which have thick necks, large, ſoft, and ſilky fleeces, large bodies, and a nimble motion in walking.

The ſheep is not among the moſt ſagacious of the lower animals. This ſpecies neither diſplay the ſame natural dexterity and addreſs, nor the ſame docility as the dog, the horſe, and ſome other of the tame animals, whoſe mental powers are conſidered as the moſt remarkable. Yet, they are not abſolutely ſtupid, as they have ſometimes been repreſented. They are ſocial: the flock follow a ram, as their leader; the leader often diſplays the moſt impetuous courage in defence of his followers: Dogs, and even men, when attempting to moleſt a flock of ſheep, have often ſuffered from the ſagacious and generous valour of the rams. The mutual affection, at leaſt, between the female parent and her progeny, is here ſufficiently tender, and well adapted to its purpoſes. The ewe ſuckles her lamb with fondneſs: and though her timidity, weakneſs, and want of formidable inſtruments of attack and defence, render her unable to make any powerful oppoſition to thoſe who ſeek to deprive her of it; yet ſhe bleats after it, and for ſome time laments its loſs with the tendereſt complaints. A lamb ſeparated when young from other ſheep, fed with milk from the hand, and treated with tenderneſs and familiarity, diſplays conſiderable docility, and often forms a ſtrong attachment to its benefactors. Admitted to this intimacy with mankind, it is apt to be guilty of little, vicious tricks; but its mildneſs and general inoffenſiveneſs of manners recommend it ſo ſtrongly to human affection and regard, that it is uſually a particular favourite of infancy and youth.

Another inſtance, if not of the amiable qualities, at leaſt of the ſagacity of the ſheep, is the dexterity with which it often eludes the vigilance of the ſhepherd, when it wiſhes to ſteal ſome delicacy of food agreeable to its palate.

The ram becomes able to propagate his kind at the age of eighteen months: the ewe is ready to receive the male when a year old. The period at which the ewes are in ſeaſon for the ram is between the beginning of *September* and the end of *November*; but if fed in good paſtures, or nouriſhed on purpoſe with ſtimulating food, they will conceive at any time in the year. It is beſt to permit them to mix with the rams at ſuch a time, that they may bring forth when there is the greateſt abundance of graſs for feeding the lambs produced. In this country, the firſt lambs uſually appear in the beginning of *February*; and their number continues to increaſe, at leaſt till *May*. The rams and the ewes are to be kept ſeparate, when it is wiſhed that they ſhould not copulate.

The ewe uſually produces only one lamb at a time. There are generally, however, a good many inſtances of two, in a flock; and on ſome very ſingular occaſions, one parent will produce three lambs at a birth. It is obſervable of this ſpecies, that they drink very little. The juice of the vegetables which they eat, and the dew and rain with which the graſs is often moiſtened, ſupply almoſt all the moiſture that they need.

Sheep, like other animals, are liable to various diſeaſes. Water often gathers in their head, and produces a diſorder which ſoon proves fatal: the feet of whole flocks are often affected with a ſort of mortification, which makes them halt when they walk, and renders them almoſt unable to run: at other times, the young eſpecially are liable to ſuffer a ſpeedy death from the effects

fects of noxious air evolved from their food in the ſtomach. The dropſy, phthiſic, jaundice, and worms in the liver, are alſo annually deſtructive to conſiderable numbers of ſheep. Several ſorts of inſects inſeſt this animal. A certain *œſtrus* or *gadfly* is very troubleſome, by depoſiting its eggs above the noſe, in the frontal ſinuſes: A tick and a louſe likewiſe feed on the ſheep; of which it is ſometimes relieved by the undiſtinguiſhing appetite of the magpie and the ſtarling. The ordinary term of the life of thoſe ſheep which eſcape diſeaſe and violence, is twelve or thirteen years.

The benefits which mankind owe to this animal are very numerous. Its horns, its fleece, its fleſh, its tallow, even its bowels, are all articles of great utility to human life.

The horns are manufactured into ſpoons, and many other uſeful articles.

The manufacture of the wool into cloths, has long formed the principal ſource of the riches of *England*. We know not indeed whether the ſimple *Britons* and the rude *Saxons* were acquainted with the important uſes of wool; it is more probable that *they* were not *. But *Henry* the Second paid ſo much attention to the manufacture and improvement of this commodity, as to forbid the uſe of any other but *Engliſh* wool in the making of cloth. Yet, the excellence of *Engliſh* wool was long known before the *Engliſh* paid much attention to the art of making woollen cloth, or attained any ſuperior ſkill in it. Wool was then a ſtaple article for exportation; and the *Flemings* were their merchants. But in the reign of *Queen Elizabeth*, ſeveral favourable circumſtances, which the talents and the patriotic ſpirit of that princeſs enabled her to take advantage of, concurred to eſtabliſh the woollen

* Brit. Zool. I. 28.

len manufactory in *England*, in that thriving ſtate in which it has ſince continued. In *Scotland* we have never attained great excellence in this manufacture. Yet, the bonnets, which, though now very much out of uſe, were in former times very generally uſed as a covering for the head, and the ſtockings of ſuch ſuperior fineneſs, for which the Iſles of *Shetland* and the city of *Aberdeen* are ſtill celebrated, are articles which ſhew that the inhabitants of *Scotland* are not leſs capable of ingenuity in this way than their neighbours of *England*. The *Spaniſh* wool has been much celebrated; and it is not very long ſince broad cloth bearing the name of *Spaniſh* was prized above the *Engliſh*. But, the wool produced in *Britain* has been, by various arts, ſo much improved as to be now not inferior in excellence to that of *Spain;* and no woollen cloth is at preſent eſteemed ſuperior to that of *Engliſh* manufacture. The ſheep with the fineſt fleeces in *England* are fed on the *Coteſwold Downs*, and in *Herefordſhire*, *Devonſhire*, *Lincolnſhire*, *Suffolk*, and *Yorkſhire*. The wool of *Wales* is coarſe; nor is that of *Scotland*, except in ſome inſtances, remarkable for fineneſs. The wool of the ſmall ſheep in the *Highlands* and the *Iſles* of *Scotland* is ſuperior to the fineſt *Spaniſh* or *Engliſh* wool.

The ſkin of this animal is prepared into leather for an inferior ſort of ſhoes, for the coverings of books, and for gloves, and into parchment.

The entrails, by a proper preparation, are made into ſtrings for various muſical inſtruments.

The milk of the ſheep is thicker than cow's milk. Its taſte is rather diſagreeably ſtrong. It is, therefore, rather made into cheeſe than uſed for drinking. The cheeſe is rich, and of a ſtrong taſte. It would probably be ſtill better, if more attention were paid to cleanlineſs in the pre-

paring

paring of it. It were perhaps beſt to leave all the milk of the ewe to her lamb.

The fleſh of the ſheep is perhaps our moſt valuable article of animal food. It is neither diſagreeably coarſe, nor yet ſo tender and delicate as not to afford ſtrengthening nouriſhment. The fleſh of the lamb is, in the proper ſeaſon, one of the niceſt delicacies that the epicure can deſire.

The bones are uſeful for various purpoſes. Of theſe, as well as of other bones calcined, are made the *cupels* uſed in the refining of metals.

Mr. *Pennant* * mentions the dung as an excellent manure. But, it is not often, I believe, that ſheep are fed in ſuch numbers on arable lands, as that their dung can be collected for this purpoſe.

The modes of managing ſheep differ in different countries, and even in the ſame country. The lambs are ſeldom ſeparated from their mothers till they become large and vigorous. As one ram is able to impregnate a good many ewes, only a ſmall proportion of the male lambs are permitted to retain their organs of generation unmutilated. Wedders are leſs vicious than rams; and their fleſh has a better flavour and reliſh. In Summer, before being ſhorn, ſheep are commonly waſhed, to improve the whiteneſs of the wool. Where ſheep are not ſhorn, they change their fleeces annually; and the beſt time for ſhearing, is when the fleece is juſt ready to fall off of itſelf. The time of the ſheep-ſhearing is always a period of feſtivity with the ſhepherds. It was ſuch in ancient times, among the ſhepherds of *Judæa* †. In *Scotland*, and in other northern countries, ſheep are uſually ſmeared with a mixture of butter and tar about the end of Autumn, to fortify and protect them againſt the ſeverities of

* Brit, Zool. I. 33. † II. Samuel, chap. xiii. v. 23.

of Winter. It ſeems a neceſſary precaution, where the flocks cannot be ſheltered in ſheds, and fed with hay and other ſuitable food, during the inclemency of the ſevere ſeaſon. But this mixture of tar and butter is often ſo injudiciouſly laid on, as to injure the health of the ſheep, and even to render its fleece leſs warm than it would otherwiſe be. It greatly contaminates the whiteneſs of the wool;—but if the butter be in due proportion, is, perhaps, rather favourable to its fineneſs. In the ſheep countries of *Scotland*, it is often neceſſary to remove the flocks in Winter from the hills on which they uſually feed, to low lands, where they may find ſome herbage, and be protected from the ſeverity of the ſeaſon. Could the practice of folding ſheep in ſheds, and feeding them with hay, or leaves of cabbage, common green *kail*, or turnips, during the ſtorms of winter, be conveniently adopted through *Scotland*, it would poſſibly prove highly advantageous to their proprietors. Even in the mildeſt winters, conſiderable numbers periſh under the preſent modes of management. *Crawford-muir* in *Clydeſdale* is one of the chief ſheep countries in *Scotland*. The management of ſheep is there well underſtood.—Men from that part have of late attempted to teach the inhabitants of the *Highlands* how to manage their ſheep better, and derive greater profits from them.

Even in *Britain* we have a good many different breeds of this animal. *Linnæus* * diſtinguiſhes the breed peculiar to *England*, as deſtitute of horns, and having its tail and ſcrotum depending to the knees. This is the fine, large breed for which *Warwickſhire*, and particularly *Lincolnſhire*, is noted. They have, in the courſe of the laſt twenty years, been introduced into *Galloway* and other

* Syſtema Nat. I. 197, edit. 12mo, Lipſ. 1788.

ether parts of *Scotland*, under the denomination of *mugg* ſheep. Their fleſh is rather coarſe, and their wool intermixed with dry hair. This is the hornleſs ſheep of *Pennant* *.

Our other ſheep are chiefly of the common horned breed. In *Wales*, and through moſt of the ſheep-paſtures in *Scotland*, they are ſmall and hardy. In delicacy of flavour and reliſh, their fleſh is much ſuperior to that of the larger breed; and even their wool, where the nature of their paſture is not ſuch as to injure it greatly, is ſaid to be of the beſt quality. The common colour is white; yet we ſometimes obſerve a black, or a dark grey fleece, and a ſmutted face: this is called the common ſheep, as being more common than any other variety of the ſpecies, throughout all *Europe* †. Some ancient writers ſpeak of a breed of ſheep with golden teeth, as belonging to *Scotland*. This appears, at firſt ſight, incredible; but Mr. *Pennant* has explained the wonder, by telling us, that he ſaw at *Athol* houſe, in the year 1772, the jaws of an ox, containing teeth thickly incruſted with a gold-coloured pyrites. The ſame thing might happen to ſheep.

The northern regions of *Europe*, particularly *Gothland* and *Iceland*, afford another variety of the ſheep, diſtinguiſhed by having their heads furniſhed with three, four, or even five horns. Beſides this abundance of horns, the ſheep of *Iceland* are remarkable for ſtraight, upright ears ‡, and very ſmall tails. In ſtormy weather, the ſheep of *Iceland*, by a ſagacious inſtinct, retreat for ſhelter to the caves and caverns, which are very numerous over the face of that iſland; but when a ſtorm of ſnow comes

* Hiſt. of Quad. I. 34. † Syſt. Nat. I. 200. Lipſ. 1788.

‡ Van Troil's Letters on Iceland, 137.

on too ſuddenly to afford them time to gain ſuch a retreat, the flock gather into a heap, with their heads towards the middle, and inclined to the ground; a poſture in which they will remain ſeveral days, without periſhing under the ſnow. Among the herbs on which they feed, the inhabitants of *Iceland* remark that ſcurvy-graſs contributes moſt to fatten them. When the ſummer crop happens to fail, the *Icelanders* are obliged to feed their ſheep in winter with chopped fiſh bones. Thoſe ſheep appear to afford milk in more abundance than ours. Dr. *Van Troil* ſays *, they give from two to ſix quarts a-day. The fleece is not ſhorn from the ſheep in that iſland as with us: About the end of *May*, it looſens of itſelf, and is ſtripped off at once, like a ſkin.

The *Spaniſh* ſheep, remarkable for the fineneſs of their wool †, and diſtinguiſhed by ſpiral horns, bending outwards, are of a breed believed to have been originally introduced into that kingdom from *England* ‡. Mention is made, indeed, of two varieties of *Spaniſh* ſheep; one of which is highly valued for the fineneſs and quantity of the wool, whereas the fleece of the other is of a very inferior quality §. The greater part of the flocks in *Spain* are of the former variety; and the care with which they are managed renders the buſineſs of the ſhepherd much more complex in *Spain* than in moſt other countries. The number of theſe ſheep fed in *Spain*, is above four millions. In ſummer, the flocks feed on the mountains in the northern parts of the kingdom; in winter, they are conducted into the milder plains of *Eſtremadura* and *Andaluſia*, and diſtributed into diſtricts. A flock conſiſts uſually of about ten thouſand ſheep, under the management of

* Letters on Iceland, 133. † Syſt. Nat. I. 198.

‡ Dillon's Travels, p. 57. Lond. 1780. Brit. Zool. I. 29.

§ Dillon's Travels, p. 47.

of a head ſhepherd, with fifty inferior ſhepherds, and as many dogs. In ſummer, the ſheep are made to eat a great quantity of ſalt. The rams are, as is uſual in other places, kept in ſeparate flocks, except during the rutting time. This begins about the end of *July*; and they are then diſtributed about the ewes. The fleece of a ram frequently weighs about five-and-twenty pounds; that of a ewe ſcarce ever more than five: but the wool of the ram is not equally fine with that of the ewe. In the middle of *September* the ſhepherds mark the ſheep of their flocks on the loins, with ochre diluted in water. This ſmearing with ochre not only diſtinguiſhes the ſheep of different proprietors, but is alſo ſuppoſed to render the wool cloſer and warmer, and to contribute to the preſervation of the ſheep's health. The end of *September* is the period about which the flocks are conducted from the mountainous paſtures where they have ſpent the ſummer, to milder and lower regions. The ſhepherds are careful to conduct each flock, if poſſible, to the ſame paſtures where it has fed in former winters. The lambs are produced early in the ſeaſon, in conſequence of the rams having been admitted to the ewes about the end of *July*. In *March*, the lambs are trimmed of a part of their tails, and the tips of their horns; marked on the noſe with a hot iron; and ſuch of the males as are not meant to be kept for rams, caſtrated, or at leaſt incapacitated for generation, by the ſqueezing of the ſcrotum, till the ſpermatic veſſels are twiſted like a rope*. In *April*, the flocks are led back to their ſummer paſtures. In *May*, the fleeces are ſhorn: Every fleece contains three ſorts of wool; the fineſt on the back and the belly; a ſecond ſort on the neck and the ſides; and on the breaſts, the ſhoulders and the thighs, a coarſer ſpecies. Conſiderably more than

* Dillon, *ubi ſupra*.

9,700,000 lb. weight of wool are annually exported from *Spain*; of which, notwithſtanding the abundance and the ſuperior quality of our *Britiſh* wool, more than one third comes to *England*.

The *African* * ſheep form a remarkable variety of this ſpecies. *Gninea* and the deſert of *Sahara* are the places of which they are originally natives; and they have been introduced into *America*. Their form is meagre; their legs are long; their ears are pendent, and covered, not with wool, but with hair; the neck is ſhaggy; and the covering of the whole body has ſo much of the dryneſs and hardneſs of hair, that it cannot be with any propriety denominated wool. Theſe are conjectured to be the animals named by *Leo Africanus Adimain*, and deſcribed by him as being of the ſize of an aſs, and of the ſhape of a ram, with pendent ears.

Travellers and natural hiſtorians aſcribe to *Africa*† another variety of the ſheep, beſides theſe. According to their deſcriptions, it differs from our common *European* ſheep, only in having an hairy, inſtead of an woolly covering.

The *Cretan* ſheep ‡ mentioned by *Buffon* under the denomination of *Wallachian*, is remarkable for large ſpiral horns. The diſtance between the horns of the ewe enlarges towards their tops: thoſe of the ram are parallel. They are underſtood to be natives of *Candia*; numerous flocks of them graze on *Mount Ida*: They are alſo ſpread through the other iſlands of the *Archipelago*, and are frequent in *Auſtria* and *Hungary*. The butchers in theſe laſt mentioned countries, prefer them to all other ſheep.

In

* Hiſt. of Quad. I. 35. Syſt. Nat. I. 198. The *Ovis Guineenſis* of Linnæus.

† The *Ovis Africana* of Linnæus. Syſt. Nat. 198; unnoticed by Pennant.

‡ The *Strepſiceros* of Pliny and Linnæus.

In ſize, and in the nature of the fleece, they differ not remarkably from the common kind.

Thoſe countries of *Aſia* which abound moſt in ſheep, afford yet another variety, diſtinguiſhed by the amazing breadth and bulk of their tails. They do not, as far as we know, differ conſiderably from our common ſheep, in any other reſpects. They are generally white; yet ſometimes vary in colour. The tail is ſeldom pointed, but commonly either ſquare or round, much like a cuſhion. The great ſize of the tail renders it often ſo incommodious to the ſheep, that it is found neceſſary to ſupport it with a ſmall wheeled machine. Some of theſe tails weigh more than 30 lb. *Perſia*, *Aſſyria*, *Arabia*, *Egypt*, *Ethiopia*, *Barbary*, and *Tartary*, all afford this variety.

Of theſe ſheep with large tails, the tails are not all of the ſame form: Some are ſhort and thick; others broad, and of a moderate length; others ſo remarkably long, as to obtain to the ſheep that carry them the denomination of long-tailed ſheep. The ſhort, thick-tailed ſheep are common among the *Tartars* *. *Thibet* affords the broad-tailed ſheep; which are in that kingdom diſtinguiſhed likewiſe for the ſuperior fineneſs of their wool. This wool, not inferior in quality to that of *Caramania*, is, like it, wrought into *ſhauls* for the great *omrahs*, which are ſold at a higher price than thoſe of any other manufacture. The long-tailed ſheep form the flocks of the *Dutch* coloniſts at the *Cape* of *Good Hope*. A late traveller †, who advanced from the *Cape* a conſiderable way into the inland country, relates, that he ſaw among the *Hottentots*, in the country adjacent to *Orange River*, a ſort of ſheep with much longer tails than thoſe of the ſheep about the *Cape*, and covered, not with wool, but with coarſe hair, which gave them, at a diſtance, the appearance

* Bell, I. 34. † Paterſon's Travels, p. 125.

pearance rather of dogs than of ſheep. The *Cape* ſheep are not leſs diſtinguiſhed by their ears, which are large and pendent, than by their tails. The tail, in its nature between fat and marrow, is a delicacy worthy of the approbation of the niceſt *Epicure*. This variety of the ſheep was not unknown to the ancient *Greeks* and *Romans*. *Ariſtotle** mentions them as inhabitants of *Syria*; and *Pliny*†, probably on *Ariſtotle*'s authority, repeats the ſame fact.

Another variety of this ſpecies is the fat-rumped ſheep, which is not provided with a tail. Its buttocks ſwell out like two globes, are perfectly ſmooth, and ſcarce leave the *os occygis* diſcernible. Its noſe is arched; its ears are pendulous; its legs are ſlender; its head black; its fleece commonly white,—but at times, black, reddiſh, or ſpotted. The globular buttocks are compoſed ſolely of ſuet; and are ſometimes ſo large as to weigh forty pounds. The whole body of the ſheep frequently weighs two hundred pounds. The voice of this animal reſembles rather the lowing of a calf than the bleeting of a ſheep.

Sheep of this character abound through the deſerts of *Tartary*, from the *Volga* to the *Irtiſh* and the *Altaic* chain. They are remarkably proliſic; producing uſually two, and not unfrequently three lambs at a birth.

The ſheep of *Bucharia* are deſcribed by *Linnæus* and *Pallas* as a particular variety; diſtinguiſhed by large pendent ears, and a large tail, formed like a cuſhion. Theſe are repreſented as a *hybridous* breed, produced by the copulation of individuals of the long-tailed variety with others, either with broad tails, or of the variety diſtinguiſhed by the want of a tail. ‡ Lambs ſkins, poſſibly of this variety, are brought from *Bucharia*, *Chiva*, and

* Hiſt. Anim. Lib. VIII. cap. 33. † Nat. Hiſt. Lib. VIII. cap. 75.
‡ Bell, I. 5.

and the adjacent countries, to *Aſtrachan*, and there ſold at a very high price, on account of their gloſſy appearance and furry texture. The wool of ſome of them is curled; that of others waved. They are uſed in *Perſia*, *Ruſſia*, and other parts, for the lining of coats, and the turning up of caps. Theſe are chiefly the ſkins of lambs taken out of the bellies of ewes killed during the period of geſtation. The inſtant the lamb is taken out of its mother's belly, it is killed and flayed. Lambs are alſo killed for their ſkins, in the ſame manner, immediately after being brought forth in the natural way; and theſe are ſcarce inferior to the others. One of theſe ſkins will ſell at *Aſtrachan* for five or ſix ſhillings ſterling. They are uſually grey or black.

Species II.—*Wild Sheep*.

Argali.

Concerning the *Argali* of the *Kirgiſian Tartars*, it is not eaſy to decide whether it ſhould be conſidered as a diſtinct ſpecies, or as one of the numerous varieties belonging to the laſt ſpecies. Some naturaliſts, upon what authorities I know not, repreſent this as the parent of our common domeſtic breed of ſheep. I believe the *argali* refuſe not to copulate with ſome of the varieties of that ſpecies. It is therefore not without heſitation that I venture to repreſent them as a diſtinct ſpecies; but their characteriſtics are remarkably different from thoſe of other ſheep.

The *Muſmon* * and *Ophion* † of *Pliny*, and Μουσμον of *Strabo* ‡, belong to this ſpecies. The name appropriated to them by *Linnæus* is *Ammon* §.

This

* Nat. Hiſt. Lib. VIII. cap. 75. † Lib. XXVIII. ſect. 42.

‡ Lib. V. quoted by Harduin, in his Notes on Pliny. § I. 200.

This ſpecies is diſtinguiſhed by horns ſituated on the ſummit of the head, which at firſt riſe upright, then bend, and are twiſted outwards, like thoſe of the common ram; and are, in the form of their circumference, flat on the interior ſide, but rounded on the exterior. The head of this animal reſembles that of our common ram; it has ſmaller ears; it is nearly equal in ſize to a ſmall ſtag; its fore are ſhorter than its hinder feet; its tail is very ſhort, and white, but tipped with yellow. The hair of the body is very ſhort in ſummer, and of a yellowiſh aſh-colour, mixed with grey. In winter, the hair is an inch and an half in length, and of a grey, ferruginous colour; the hair on the neck is, in this ſeaſon, rather longer than that of the body; and the hair under the throat ſtill longer. In ſpring, the animal caſts its hair. The females are ſmaller than the males. Theſe animals, as well as our common ſheep, ſometimes want horns.

Siberia, *Kamtſchatka*, and the *Kurili* iſlands, are the favourite regions of the wild ſheep. They are ſocial animals, and feed together in ſmall flocks. They are the moſt uſeful animals that the *Kamtſchatkans* poſſeſs. Theſe rude people have not indeed attempted to domeſticate the *argali*; but they ſpend the ſummer in hunting them on the wild and precipitous mountains on which they feed. Sometimes they ſet bent croſs-bows in the paths through which they expect the *argali* to paſs, in ſuch a poſition, that when the animal treads on a certain ſtring belonging to the bow, the arrow is diſcharged, and lodged in its bowels. Sometimes they employ dogs in the chace. The dog never overtakes the wild ſheep; but while the ſheep's attention is engaged by the dog, the hunter, without being obſerved, approaches near enough to ſhoot him with a ball or an arrow. The *Kamtſchatkans* clothe themſelves with the ſkins of theſe animals,

and

and eat their fleſh, eſteeming it a delicacy fit for the banquets of the Gods.

The *Mongols* and *Tunguſi* are likewiſe acquainted with the *argali*, and not leſs fond of hunting them than the *Kamſchatkans*. They, however, attack them in a different manner. They take out againſt them a great multitude of dogs and horſes, and ſtrive to ſurround the flocks before they are aware: But this is not eaſy; for the *argali* are ſo ſwift and ſo cunning, that when they diſtinguiſh, either by ſight or ſmell, the approach of an enemy, they infallibly make their eſcape.

Father *Rubruquis*, who viſited the nations of *Tartary* as ambaſſador from *St. Lewis* of *France*, in the relation of his travels mentions this animal under the name of *Artack*, and tells us, that he could ſcarce lift a pair of its horns with one hand *.

This animal is aſcribed by the ancients to *Spain*, *Sardinia*, and *Corſica*, and ſtill exiſts in *Sardinia* and *Corſica*. Several pairs have been imported from theſe iſlands into *Britain*.

General *Paoli*, who, after making a brave, but ineffectual effort to vindicate and eſtabliſh the liberties of his country, found an honourable aſſylum in *Britain*, imported from *Corſica* a male animal of this kind, named *Martino*. *Martino* died at the age of four years. His horns were then twenty-two inches long; but the poor animal happened to be ill uſed in the latter part of his life,—otherwiſe his horns would have been conſiderably longer.

The *Corſicans* call the male *Mufro*, the female *Mufra*. They inhabit the higheſt tracts of country in the iſland. They can only be ſhot or taken by ſtratagem; nay, ſuch is their wildneſs, cunning and velocity, that the old ones can never be taken alive. They feed on the moſt acrid

* Harris's Coll. of Voyages, I. 560.

plants. When tame, they eat tobacco, and drink wine. Their fleſh, though always lean, is ſavoury and agreeable to the taſte. The ſkin is thick, and is uſed in *Sardinia*, both as an under ſhirt, for a preſervative againſt the noxious effects of bad air, and as a *ſurtout*, to defend the body againſt the impreſſion of thorns and briars, in paſſing through thickets.

If we may credit *Hector Boece*, theſe animals were once inhabitants of the *Britiſh* iſles. He aſcribes to *St. Kilda* a ſpecies, of which his deſcription nearly agrees with what we have here ſaid of this animal. To confirm his account, which might otherwiſe perhaps not obtain credit, a figure of a *muſmon* has been diſcovered in a piece of *Roman* ſculpture, taken from *Antoninus's* wall near *Glaſgow*.

The old rams of this ſpecies are very ſtrong. It is with difficulty that even ten men can hold one of them. They quarrel, like the rams in our flocks of common ſheep; and in their quarrels one often ſtrikes the other down a precipice, where he is inſtantly daſhed in pieces, or ſoon periſhes. The horns of two or more are ſometimes accidentally entangled; in which caſe they fall down and periſh together. The young are eaſily tamed. They produce with the common ſheep; and it is even ſaid that the progeny are not barren.

The lofty range of mountains in *South America* called the *Cordilleras*, afford a different variety of this ſpecies. Thoſe are of the ſize of a large kid, and ſimilar in form to the domeſtic goat; yet diſtinguiſhed from that animal, by having,—the male, ſmall horns, bending outwards, while the female is without that ornament; and being not bearded, but ſmooth on the chin. Theſe animals are known in *America* by the name of *pudu;* they feed together in flocks: in the mildeſt months they frequent the ſummits

ſummits of the mountains; but retire from the ſeverities of winter into the vallies, where they are eaſily taken;— and when taken, of whatever age, it is not difficult to domeſticate them.

The *bearded* * ſheep, or † *Siberian* goat of *Pennant*, which that naturaliſt repreſents as remarkable for a divided beard, ſeems to be merely a variety of this ſame ſpecies. It is deſcribed as having its horns almoſt joined at the baſe, diverging and bending outwards, with their points nineteen inches diſtant from each other; twenty-five inches in length; and, at the thickeſt place, eleven in circumference. Its tail is very ſhort; its breaſt, neck, back, and ſides, are of a pale ferruginous colour. This animal is ſaid to inhabit the mountains of *Barbary:* ſome individuals of the kind have alſo been diſcovered on the mountains of *Aſia*; and the *tragelaphus* repreſented by *Pliny* ‡ as an inhabitant of the banks of the river *Phaſis*, is thought by naturaliſts to belong to this variety of the ſheep.

* Hiſt. of Quad. I. 46. † Syn. of Quad.
‡ Nat. Hiſt. Lib. VIII. ſect. 50.

Genus IV.—*Goat.*

The characteriſtics of this genus are, horns almoſt joining at the baſes, and bending backwards; eight cutting teeth in the lower, but none in the upper jaw; and a beard on the chin.

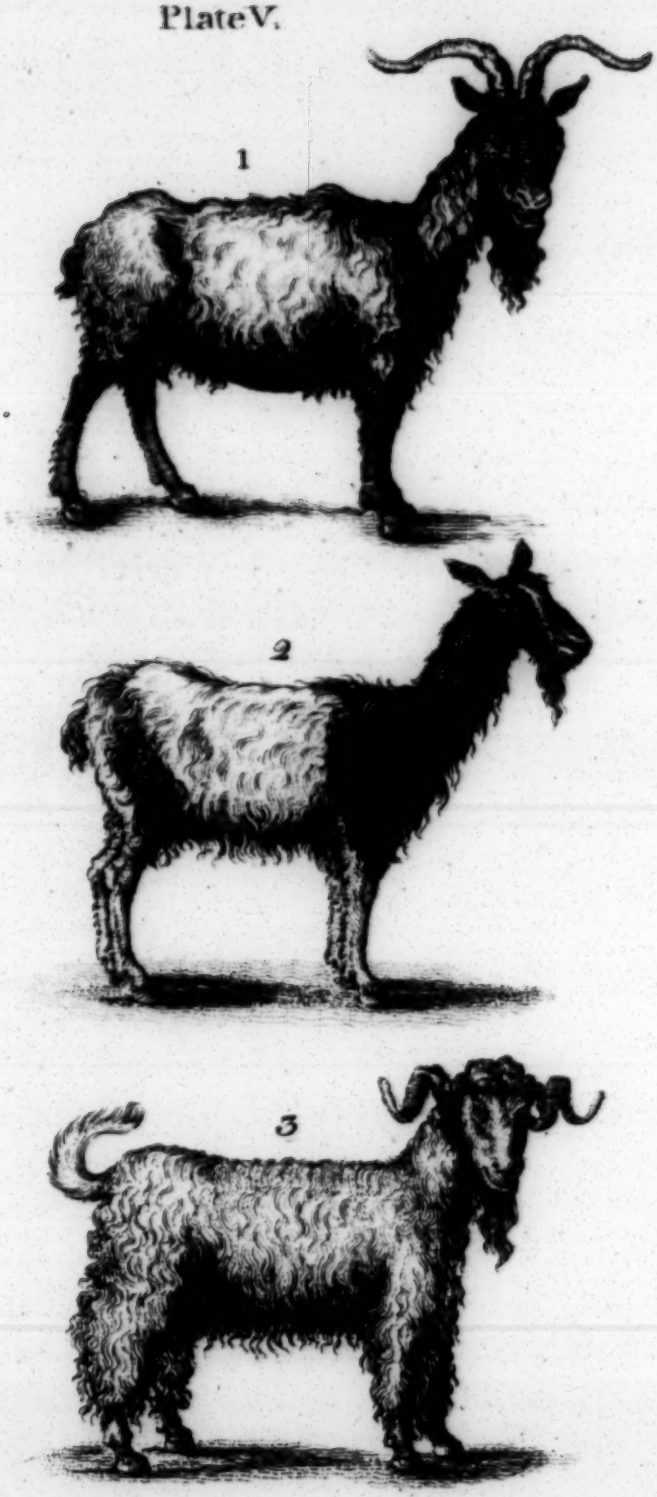
Species I.—*Ibex, with ſmooth, black horns.*

The *Caucaſan ibex* of *Pennant* *, the *Steinbok* of the *Germans*, the *Aegagrus* of *Linnæus* †, and the *wild goat* of ſome other writers, ſeems to be better diſtinguiſhed by the ſpecific name here aſſumed, than by theſe or any of the other names by which it has been hitherto known.

This animal is ſuperior in ſize to the largeſt he-goats: its form reſembles the ſtag: its body is covered with ſhaggy hair; and, for the greateſt part, of a grey or a yellowiſh ruſt-colour: a black line runs along the back: its chin is furniſhed with a great beard, the colour of which is between a dun and a cheſnut: its head is of a thick form, and remarkably hard: its horns riſe almoſt out of one baſe; diverge and bend backwards as they advance towards the extremities; but approach nearer each other, and are hooked at the points. They are ſmooth and black, with ſharp ridges on the upper parts, which

* Hiſt. of Quad. I. 51. † Syſt. Nat. I. 193.

Plate V.



1. HE GOAT 2. SHE GOAT 3. GOAT of ANGORA

which are hollow on the exterior ſides. The tail is very ſhort and black; the neck and joints are remarkably ſtout: the belly affords a bezoar. The females are generally deſtitute of horns; and when they happen to be furniſhed with them, they are very ſmall in compariſon with thoſe of the males. The horns of the males are commonly three feet in length, and often eight pounds in weight.

This ibex diſplays amazing agility; it often leaps headlong down precipices, and eſcapes uninjured, by falling on its horns. The moment it reaches the ground, it ſprings up upon its legs, and bounds nimbly away.

The lower mountains of *Caucaſus* and *Taurus*, the hills of *Laar* and *Khorazan* in *Perſia*, the iſland of *Crete*, and the *Alps* in *Europe*, are all habitations of this animal. *Bell*, a traveller, whom, from reſpect for his good ſenſe and veracity, I am proud to quote as often as poſſible, relates *, that he ſaw one of theſe animals in the province of *Kurdiſtan*, and deſcribes it as larger than the common goat, and furniſhed with horns of a prodigious ſize.

* Travels, I. 83.

SPECIES II.—*Ibex with knotted horns.*

THERE is a different wild goat, beſide that above deſcribed, an inhabitant of both *Europe* and *Aſia*. This is the *Ibex* of *Pliny*, *Pennant*, *Linnæus*, and ſeveral other naturaliſts; and is by the *Germans* confounded with the laſt mentioned ſpecies, under the common name of *Steinbok*.

It is diſtinguiſhed by large, knotted horns, reclining backwards, nearly of the ſame ſize with thoſe of the laſt ſpecies; a ſmall head; large eyes; a thick, ſhort, ſtrong body; ſtrong legs; very ſhort hoofs; and a ſhort tail. Its body is of a deep brown colour, with a mixture of hoary hairs; its belly is of a tawny white colour; its legs are partly black, partly white; the ſpace under the tail is, in ſome individuals, tawny, in others white. Its hair is rough; and the male is furniſhed with a duſky beard. The females are ſmaller in ſize than the males; and, like the common ſhe-goat, have ſmaller horns than the males;—and thoſe with fewer knobs on the upper ſurface.

The favourite haunts of this animal are the moſt precipitous and inacceſſible heights of lofty mountains. It is remarkably ſwift; and diſplays amazing agility and dexterity in leaping. It is a gregarious animal: and though by chooſing ſuch places for its habitation, it ſeems averſe to all intercourſe with mankind; yet when caught young, it is not incapable of domeſtication. The female is ſcarce ever known to produce above one or two young ones at a birth. When the period of parturition comes on, ſhe retires from the company of the males. The ibex is ſaid to be naturally a ſhort-lived animal. Its fleſh is eſteemed good eating. Its blood was

once

once much valued for its virtues, as a remedy in caſes of pleuriſy.

The ibex is an object of the chace; but it is dangerous to purſue theſe goats, and exceedingly difficult to take or kill them. The inacceſſible nature of the places to which they generally reſort, their dexterity in leaping, and even their cunning in attacking the huntſman, are the principal circumſtances that render this chaſe ſo difficult. They ſometimes tumble the huntſmen over thoſe precipices, among which they themſelves leap about without danger. They often fling themſelves down the precipices; and, like the former ibex, falling on their horns, eſcape unhurt. It is ſaid,—but the ſtory is rather too wonderful,—that to eſcape the hunter, they ſometimes hang themſelves by the horns from trees projecting over precipices.

Theſe animals inhabit the rude ſummits of the chain of mountains extending from Mount *Taurus* between eaſtern *Tartary* and *Siberia*. A few are alſo found to the eaſt of the *Jeneſei*. The province of *Hedsjæs* * in *Arabia*, and the loftieſt mountains in *Crete*, are alſo known to afford the ſame ſpecies. In *Europe*, this *ibex* appears on the *Carpathian* and the *Pyrenæan* mountains; in the country of the *Griſons*; and amidſt the higheſt points of the *Rhætian Alps*.

Theſe two ſpecies, both exiſting chiefly, if not entirely, in a wild ſtate, and principally diſtinguiſhed from each other by the appearance of their horns, are conſidered as the only diſtinct ſpecies which this genus of animals affords. The other breeds of goats, ſcattered over different parts of the world, are viewed only as ſo many varieties. Theſe varieties have been all thought to originate, either from the one or the other of the ſpecies deſcribed, or perhaps

* Forſkal, Deſcriptiones Animalium, p. 4.

perhaps from the intermixture of the two together. For this reaſon, inſtead of dividing the varieties between the two ſpecies, or ſubjoining them to any one of the ſpecies, I introduce their hiſtory here, without pretending to trace their origin.

The common DOMESTIC GOAT, believed by ſome naturaliſts to be neareſt allied to the *ibex with knotted horns*, and by others repreſented as a deſcendant of the *ibex with ſmooth, black horns*, is diſtinguiſhed by horns which incline gently backwards as they riſe from their baſes, increaſing the curve towards the upper extremity. This animal is ſeldom ſo large as either of the wild goats above deſcribed. The male is honoured with a beard. The fineſt bucks have pendent ears, thick thighs, black thick ſoft hair, a long buſhy beard, a ſhort fleſhy neck, and a light head. The beſt ſhe-goats have large bodies, thick thighs, long capacious udders, and ſoft buſhy hair; and walk with a light, lively ſtep.

The character of the goat is much leſs amiable than that of the ſheep. Vicioufneſs, ſubtlety, and leachery, are the predominant qualities of this animal. Even in his ordinary motions he betrays the caprice of his character. He walks, runs, leaps, retires, approaches, in the moſt irregular manner imaginable. Our domeſtic goat, like the ibex, is amazingly ſwift and agile. He mounts the moſt rugged mountains, and fearleſsly approaches the ſteepeſt precipices: and though he appears thus raſhly to expoſe himſelf to certain danger; yet ſuch is his addreſs in running, climbing, leaping, and balancing his body in difficult ſituations, that he ſcarce ever meets with any unfortunate accident. The plants which the goat prefers for food are chiefly ſuch as are deſpiſed by the ſheep, the cow, the horſe, and moſt other domeſtic animals;

mals; and indeed grow in ſituations where few other animals can approach them. Hemlock, euphorbium, and ſeveral moſſes, are abſolutely delicacies to the goat*. He devours, with great avidity, the bark, leaves, and branches of moſt trees.—The ſhe-goat goes five months with young, and brings commonly one or two; but ſometimes even three or four at a birth. The kids are uſually produced between the end of *February* and the beginning of *May*. The male is capable of engendering when a year old; and the female ready to receive his embraces at the age of ſeven months: but it is better to reſtrain both ſexes from venery, till they attain the age of eighteen months or two years. The ardour of the male is remarkable; but in the ſpace of three or four years his vigour is waſted; and at the age of five or ſix, he feels prematurely all the languid feebleneſs of old age. The buck has a rank nauſeous ſmell; proceeding not from his fleſh, however, but from his ſkin. Though fond of the ſummits of bleak and lofty mountains, the goat is but ill qualified to bear extreme cold. In *France*†, goats are ſheltered under roofs in winter, as well as black cattle, and fed with branches of trees gathered for the purpoſe in autumn, and with cabbages, turnips, and other ſimilar plants. But heat, however intenſe, is ſcarce ever injurious to the health of goats; they baſk in the rays of the ſun, without feeling themſelves ſcorched, or in any other way diſagreeably affected.

The domeſtic goat is well known through *Europe*, and even in the other regions of the globe. Conſiderable numbers are kept in the mountainous parts of *Wales*. The *Welch* goats‡ are greatly ſuperior in ſize to

* Many proprietors of ſheep keep a few goats among their flocks to clear the paſtures of thoſe herbs, which, though delicacies to the goat, are noxious to the ſheep. Goat herds pretend that their goats eat up adders very voraciouſly.

† Smellie's Buffon, III. 495. ‡ Pennant's Brit. Zool. I. 36.

any of the breeds cultivated in other mountainous countries,—and commonly of a white colour. In *Caernarvonſhire*, they are generally ſuffered to run wild on the rocks, in both winter and ſummer. If we may judge from the expreſſions of the ancient paſtoral poets, goats were in their days tended in *Greece* and *Italy* with not leſs care than ſheep *. In *Norway*, goats are numerous, notwithſtanding their inability to ſuffer extreme cold. Nay, in that northern climate, they thrive ſo prodigiouſly, that, as *Pontoppidan* relates, not leſs than 70,000 or 80,000 raw hides are annually exported from *Bergen*. Even *Iceland* is not deſtitute of goats; but that iſland is ſo ſcantily ſupplied with trees, ſhrubs, and the other plants on which theſe animals delight to brouſe, that they are not numerous nor thriving there. Attempts have been made to introduce this animal into *Greenland;* and as the goat, when it cannot obtain its favourite vegetable food, refuſes not to eat dried fiſh, it is found capable of ſubſiſting even in that barren and dreary region. Our common domeſtic goat is not, indeed, a native of *America*; but with the other chief domeſtic animals of the Old World, has been conveyed thither by the ſettlers from *Europe*. In *South America*, theſe animals have multiplied prodigiouſly; but the climate of *Canada* has been found too ſevere. *Africa*, *India*, *Madagaſcar* and the † *Oriental* iſlands all afford this animal. Our voyagers to the *South Seas* found abundance of goats in the iſland of *Juan Fernandez*; which,—though in conſequence

* Ite meæ, felix quondam pecus, ite capellæ:
Non ego vos poſthac, viridi projectus in antro,
Dumoſâ pendere procul de rupe videbo.
Carmina nulla canam: non, me paſcente, capellæ,
Florentem cytiſum, et ſalices carpetis amaras. Virg. Ecl. I.

† Marſden's Sumatra, page 93. Barjowſkis' memoirs, Vol. I. p. 62 and 357.

conſequence of living in regions where they are almoſt totally ſequeſtered from human intercourſe, they were become in their character and diſpoſitions abſolutely wild,—yet were of the ſame variety with the common domeſtic goat of *Europe*. In *Batavia* *, the *Dutch* coloniſts have, among their other domeſtic animals, herds of goats.

A ſmall iſland between *Bonaviſta* and *Mayo* is related by an *Engliſh* voyager who viſited theſe, the Cape *de Verd* iſlands, and the coaſt of *Guinea*, in the year 1566, to have contained at that time ſuch numbers of goats, that the *Portugueſe* who inhabited it, uſed annually to export to Europe about 40,000 ſkins. The few inhabitants of the iſland valued the fleſh ſo little, that they cheerfully ſupplied our voyager and his company with as many carcaſes as they could uſe, without expecting any price †.

The goat, though leſs friendly, and leſs ſerviceable to mankind than the ſheep, affords, however, a variety of articles of no ſmall utility to human life.

The fleſh of this animal is wholeſome food. That ‡ of a ſplayed goat, ſix or ſeven years old, is remarkably ſweet and fat. The haunches, ſalted and dried, make excellent hams. The dried blood of the he-goat is, with ſome perſons, a ſpecific for the pleuriſy and inflammatory diſorders.

The milk is of the beſt kind; much more agreeable than that of the ſheep, and poſſeſſed of ſome valuable medicinal qualities. The cheeſe prepared from it is much eſteemed in ſome places. The cream is ſcarce ever ſeparated for butter. The milk and the whey are both eagerly drunk, as powerful remedies in caſes of conſumption. In the ſummer months, people of conſumptive habits, through *Scotland* and *Ireland*, reſort in conſiderable numbers to places where goat's milk is obtained.

* Deſcription of Batavia in Hawkeſworth's account of Cook's firſt Voyage.

† Relation of the Voyage by Mr. George Fenner, in Hackluyt's Coll.

‡ Brit. Zool. I. 38.

The horns of the goat are materials of manufacture, as well as thoſe of the cow and the ſheep.

Even the diſagreeable odour of the he-goat is thought to operate on the human frame as a cure for nervous and hyſterical diſtempers, and as a good preventive againſt many others. Horſes, it is imagined, find it very refreſhing; and many perſons of ſkill in the management of horſes, keep a he-goat in their ſtuds or ſtables, for this very purpoſe *.

But the ſkin is perhaps the moſt valuable part of the goat. It is prepared for a great many purpoſes, either with or without the hair. It covers the ſoldier's knapſack, and is manufactured into bolſters and hangings. When dreſſed without the hair, the ſkin of the kid eſpecially, becomes a ſoft and pliant ſpecies of leather, excellent for gloves, and fit to be made into ſtockings, bed-ticks, ſheets and ſhirts. It takes a dye better than any other ſkin; is ſuſceptible of the richeſt colours; and when it uſed formerly to be flowered, and ornamented with gold and ſilver, became an elegant and ſuperb article of furniture. The hair ſeparated from the hide, is a valuable material to the wigmaker. The whiteſt wigs are made of goats hair. That on the haunches is brighter, longer and thicker than that on the other parts of the body. A ſkin well furniſhed with hair of a good quality, is frequently ſold at no leſs a price than a guinea. *Pliny* † relates, that in *Cilicia*, and either in *Syria* or in the country adjacent to the *African Syrtes*,—for there are different readings of this paſſage,—the hair of the goat uſed anciently to be ſhorn in the ſame manner as in other places the fleece of the ſheep.

The tallow of this animal is alſo an article of conſiderable value. It is much purer, and approaches in its nature

* Marſhall's Rural Economy of Glouceſterſhire.

† Nat. Hiſt. VIII. 76.

nature much nearer to butter than the tallow of either the ox or the ſheep. Where goats are numerous, it is often uſed by the poorer people in the preparation of food. Candles made of it are far ſuperior in whiteneſs to thoſe made of other tallow, and burn better.

The ANGORA goat is ſhorter in the form of its body than our common domeſtic goat. Its ſides are broader and more flat; its legs ſhorter; and its horns ſtraighter. Its hair is ſoft and gloſſy like ſilk, and of a ſilver white colour, and hangs down in curling locks, eight or nine inches long. Its horns are wreathed in a ſpiral form, and extend towards its ſides. Its ears are plain and pendulous.

Theſe goats are confined within the tract of country around the towns of *Angora* and *Beibazar* in *Aſiatic Turkey*. The goats of *Cougna*, the old *Iconium*, are probably nearly allied in their character to thoſe of *Angora*. *Tournefort*, in mentioning the goats of theſe two different diſtricts, repreſents thoſe of *Angora* as diſtinguiſhed from thoſe of *Cougna* only by diverſity of colour; the latter being all either black or brown. A Baron *Alſtroemer* * attempted, with what ſucceſs I know not, to introduce this breed into *Sweden*, for the ſake of the hair. It is remarkable, that not only the goat, but even the ſheep and the hare of *Angora* have longer and ſofter hair than the ſame animals in any other part of the globe †.

The length, the fineneſs, the curling ſoftneſs, and the beautiful white colour of the hair of the *Angora* goat, render it a very valuable commodity. It is ſpun into thread; of which the fineſt camblets ‡ are wrought. The *Turkiſh* adminiſtration, with a wiſe policy, prohibit this

* Haſſelqueſt's Travels in the Levant, Engliſh Tranſ. 191. Lond. 1766.

† Syſt. Nat. I. 194. *note*.

‡ Haſſelqueſt, *ubi ſupra*. Nieuhoff's Travels, in Churchill's Coll. II. 185. Lond. 1744.

this hair from being exported raw; becauſe the ſpinning of it affords employment and ſuſtenance to a number of their ſubjects. An animal furniſhed with ſuch precious hair, would ſurely be a valuable acquiſition to *Britain*, if we might hope that it would thrive in our climate. Perhaps ſome patriot may one day make the experiment.

Syria affords a peculiar variety of the goat *, with large pendulous ears, and ſhort black horns. The ears are uſually between one and two feet in length, and ſometimes ſo troubleſome to the animal, that the owners find it proper to cut off one of them for its convenience. This goat is rather larger in ſize than our common domeſtic goat; its hair is uſually yellow. This variety abounds through the *eaſt*, and is found alſo among the *Kirghiſian Tartars*. The city of *Aleppo* is plentifully ſupplied with their milk. They appear, from the relation of *Ariſtotle*, to have been known to the ancients.

Africa affords a variety of the goat, diſtinguiſhed chiefly by their dwarfiſh ſize. The horns of the male are ſhort, thick and triangular, and lie flat upon the ſkull: he is covered with rough hair; and two long hairy wattles hang beneath his chin. The female has ſmaller horns, a ſmooth coat, and no wattles.

Whidaw, or *Juda* in *Africa*, breeds a peculiar variety, of a ſmall ſize, with ſhort ſmooth horns, turning a little forwards at the points. Some natural hiſtorians repreſent this animal as a native of *America*; others ſtrenuouſly contend, that neither the goat nor any other domeſtic animal was known in *America* before its diſcovery by the *Spaniards*. It would be difficult to decide in the caſe. This goat is not confined to *Whidaw*; but common alſo in *Guinea*, *Angola*, and ſome other parts of *Africa*. I know not whether the domeſtic goat of Sumatra

* The *Capra Mambrica* of Linnæus. Syſt. Nat. I. 194.

Sumatra * mentioned by *Mr. Marſden* as ſmall in ſize, and of a brown colour, may not belong to the ſame variety.

The *Capricorn* is another variety; the characteriſtic marks of which are ſhort horns turning forwards at the ends, marked on the ſides with rings; and thoſe more prominent before than behind. *M. Buffon* † conſiders theſe as an intermediate race between the domeſtic and the wild goat.

A breed of tame goats reſembling the common kind, but without horns, inhabit the country of the *Cabonas*, north of the *Cape of Good Hope* ‡.

Mr. Marſden in his hiſtory of *Sumatra*, deſcribes an animal which ſeems to have been unknown to former writers in natural hiſtory, and which I am at a loſs whether to rank among the goats or the antelopes. It is about three feet in height and four in length. Its horns are about ſix inches long, and turned back with an arch. Its hinder parts reſemble thoſe of the bear in ſhape, being rounded into a ſemicircle from the back. Its tail is ſmall, and terminates in a point. Its legs are clumſy. Along the ridge of the back, the hair riſes almoſt as coarſe and ſtrong as the briſtles of a boar. A large tuft of greyiſh hair ſpreads over the ſhoulders; the reſt of the body is all over black. It has no beard. The natives of *Sumatra* denominate this animal *Cambing Cotan* §, or the wild goat of the woods; and repreſent it as remarkably ſwift. It is wild and ferocious in its diſpoſitions

* Marſden's Sumatra, p. 93.

† Smellie's Buffon, VI. 373.

‡ Journal Hiſtorique, 76. quoted by Mr. Pennant, Hiſt. of Quad. I. 76.

§ Marſden, *ubi ſupra.*

Genus IV.—*Camelopardalis or Giraffe.*

This animal conſtitutes a ſolitary genus; eſſentially diſtinguiſhed from all the other genera of animals, though not diverſified into diſtinct ſpecies or different varieties.

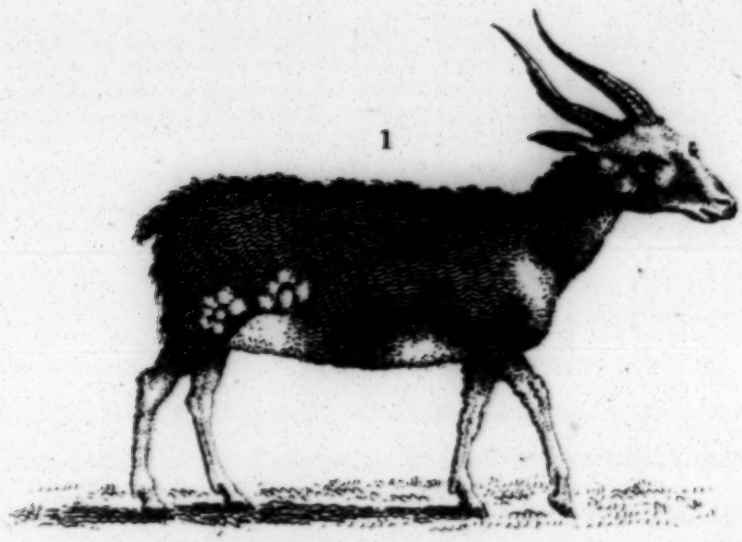
Moſt of the natural hiſtorians and other writers who have deſcribed or taken notice of it, mention it under one of theſe two names.

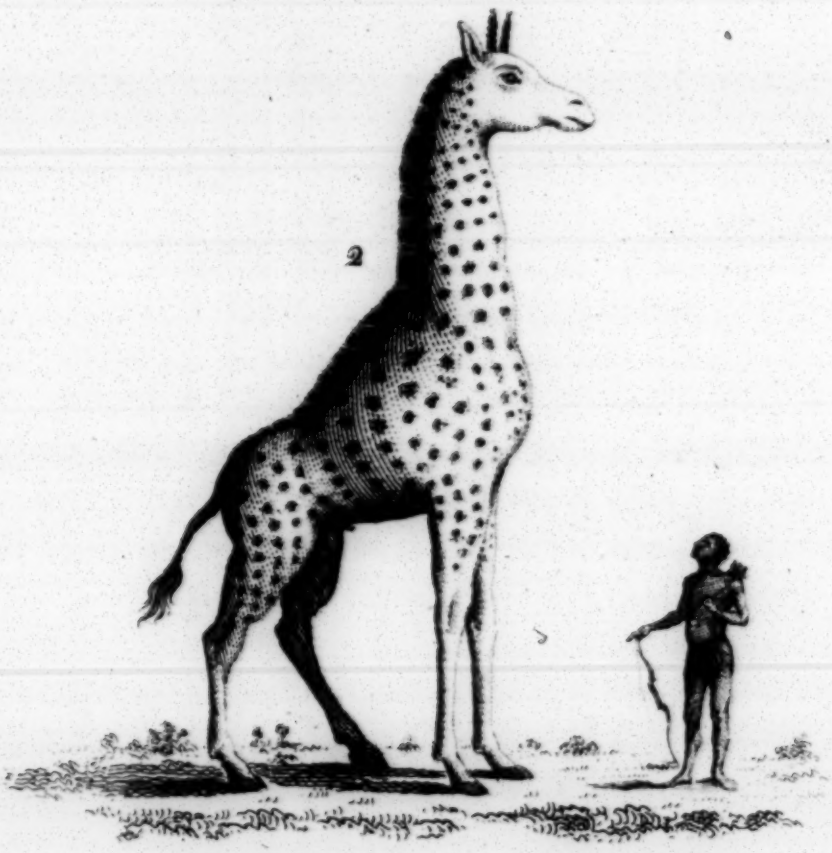
Its moſt remarkable characteriſtics * are ſhort upright horns, truncated at the top, and covered with ſkin and hair; the hair increaſing in length towards the extremity of the horn, and forming a ſort of tuft around its top: the neck and ſhoulders longer in proportion to the reſt of the body, than thoſe of any other animal: eight cutting teeth in the lower, but none in the upper jaw; and ſix grinders or double teeth on each ſide, both above and below. The height of the camelopardalis, when ſtanding erect, is commonly between fourteen and fifteen feet from the hoofs of the fore legs to the top of the horns. His fore and hinder legs are nearly of the ſame length; which is commonly between five and ſix feet. His height behind, from the hinder feet to the rump, is between eight and nine feet. His neck and head are nearly equal in length to the reſt of his body; and his whole length from the head to the rump generally about eleven, or between eleven and twelve feet. The mane does not extend beyond the ſhoulders; the hair of which it is compoſed is uſually between three and four inches long. His tail reſembles a bullock's; is bare till near the extremity, but terminates in a beautiful tuft of ſtrong hair of conſiderable length. He is cloven-footed. The female has few teats.

Thoſe

* Paterſon's Travels, p. 126.——Sparrman, Vol. II.

Plate VI.





1 WOOD-GOAT 2 CAMELOPARD

Theſe animals are either of a reddiſh colour, or of a mixture of dark brown and white, or of black and white. The hair of the tail is moſt frequently black. The body and thighs are, according to ſome accounts, ſpotted all over with ſpots of a lighter colour than the ground; according to others, chequered with light bars.

The length of his neck and ſhoulders renders it difficult for the camelopard, though a ruminating animal, to crop graſs on the ground. He feeds chiefly, therefore, on the leaves and tender ſhoots of trees. The mimoſa and the wild apricot-tree ſupply the chief part of his nouriſhment. When he eats graſs from the ground, he ſometimes bends one of his knees as horſes do; when plucking leaves and ſmall branches from tall trees, he brings his fore feet about a foot and a half nearer each other than his hinder feet *.

The camelopard is mild and peaceful in his diſpoſitions. Far from attacking mankind or other animals, he does not even expreſs reſentment or attempt reſiſtance when attacked. *Sparrman* † relates, that when a *Major Gordon*, at the *Cape of Good Hope*, wounded one of theſe animals in the leg, ſo that it could not raiſe itſelf from the ground, it ſhewed not the ſlighteſt ſign of reſentment. When its throat was cut, however, it ſpurned the ground with much more force than any other animal has been known to exert on the ſame occaſion.

The fleſh of the young camelopard is agreeable enough food; but has ſometimes a ſtrong flavour of a certain ſhrub of the mimoſa tribe. The marrow is a favourite delicacy with the *Hottentots*; it is chiefly for that they hunt the animal. They kill it with poiſoned arrows.

* Sparman, Vol. II. p. 239. † *Ibid.*

Of its ſkin they make veſſels for containing water and other liquors.

This ſingular animal, though not eminently ſwift, is not ſo eaſily overtaken in the chace as has been ſaid. It does not limp in walking, but ſometimes paces and ſometimes gallops. Notwithſtanding the irregularity and apparent unwieldineſs of its form, it runs long before being ſenſibly affected with fatigue; and the ground over which it moves with eaſe, is often ſo ſharp and rough as to lame horſes that follow it.

It appears to have been known to the *Romans* in early times. *Pliny* deſcribes it with tolerable accuracy as a native of *Ethiopia*; and informs us that it was firſt exhibited in the circus at *Rome* by *Julius Cæſar*, in a ſhow of wild beaſts; with which, as we learn from others, he entertained the people, three years before his death *. It is ſtill found in the foreſts of *Ethiopia*; and is believed to inhabit the interior parts of *Africa*; but it is chiefly in the neighbourhood of the *Cape of Good Hope* that *Europeans* have had opportunities of getting acquainted with it, in modern times.

The ſingularity of its form, the mildneſs and ſimplicity of its manners, and its being confined to a region of the globe, of which the topography, the natural and the civil hiſtory are but very imperfectly known, have occaſioned a good many miſrepreſentations and doubts concerning this animal. *Buffon*, in his hiſtory of it, preſents us with a variety of information † communicated to him by correſpondents. But he ſeems to offer it with doubt and heſitation; and his friends, from whom he received thoſe communications, appear to have been but imperfectly informed themſelves, and even diſagree in various

* Nat. Hiſt. Lib. VIII. 27. † Smellie's Buffon, Vol. VII. 109.

various particulars. *Mr. Pennant* *, in his account of the camelopard, ſcarce diſcovers his uſual accuracy. Nor is the deſcription given by *Linnæus* remarkably diſtinct or authentic. Happily, two travellers who have of late viſited the ſouth of *Africa*, *Dr Sparrman* and *Lieutenant Paterſon*, both eager ſtudents of natural hiſtory, have examined and deſcribed the form, the manners, and the general character of this animal in a very ſatisfactory manner. The above hiſtory of it reſts chiefly on their authority †.

* Hiſt of Quad. I. 58.

† In one of *Lieutenant Paterſon's* journeys from the *Cape* into the interior parts of *Africa*, a gentleman in company with him ſhot a male camelopard, full grown. *Mr. Paterſon* preſerved the ſkin and ſkeleton of the animal. The ſkin has ſince been ſtuffed, and put into the hands of that eminent naturaliſt *Mr. John Hunter*. The following are the dimenſions of this ſpecimen, which *Mr. Paterſon* gives in his travels.

	Feet.	Inch.
The height of his natural poſition, from the hoof to the top the horns,	14	9
Ditto from the hoof to the ſhoulder,	9	7½
Ditto from the hind feet to the rump,	8	1½
Length of the fore legs,	5	7
Ditto of the hind legs,	5	6½
Ditto of the mane from the head to the ſhoulders,	5	2½
Circumference of the neck below,	5	0
Ditto in the middle,	2	10
Ditto at the head,	2	1
Length of the neck,	5	3
Ditto of the tail, without the hair,	2	9½
Ditto, with the hair,	4	10½
Breadth of the hind hoof,	0	5½
Length of ditto,	0	8¼
Ditto of the fore hoof,	0	8¼
Breadth of ditto,	0	5¼
Length of the horns,	1	0½
Diſtance between ditto,	0	3

Paterſon's Travels, p. 126, 127.

Genus VI.—*Antelope.*

The generic characters of the antelope are, hollow horns directed backwards, and either annulated or ſpiral; eight cutting teeth in the inferior, but none in the upper jaw; three feathered lines of hair, marking the inſide of the ears longitudinally; limbs of a ſlender, elegant form; and commonly ſmall holes, *pori ceriferi*, under the eyes, but not connected with them, through which oozes a wax-like matter.

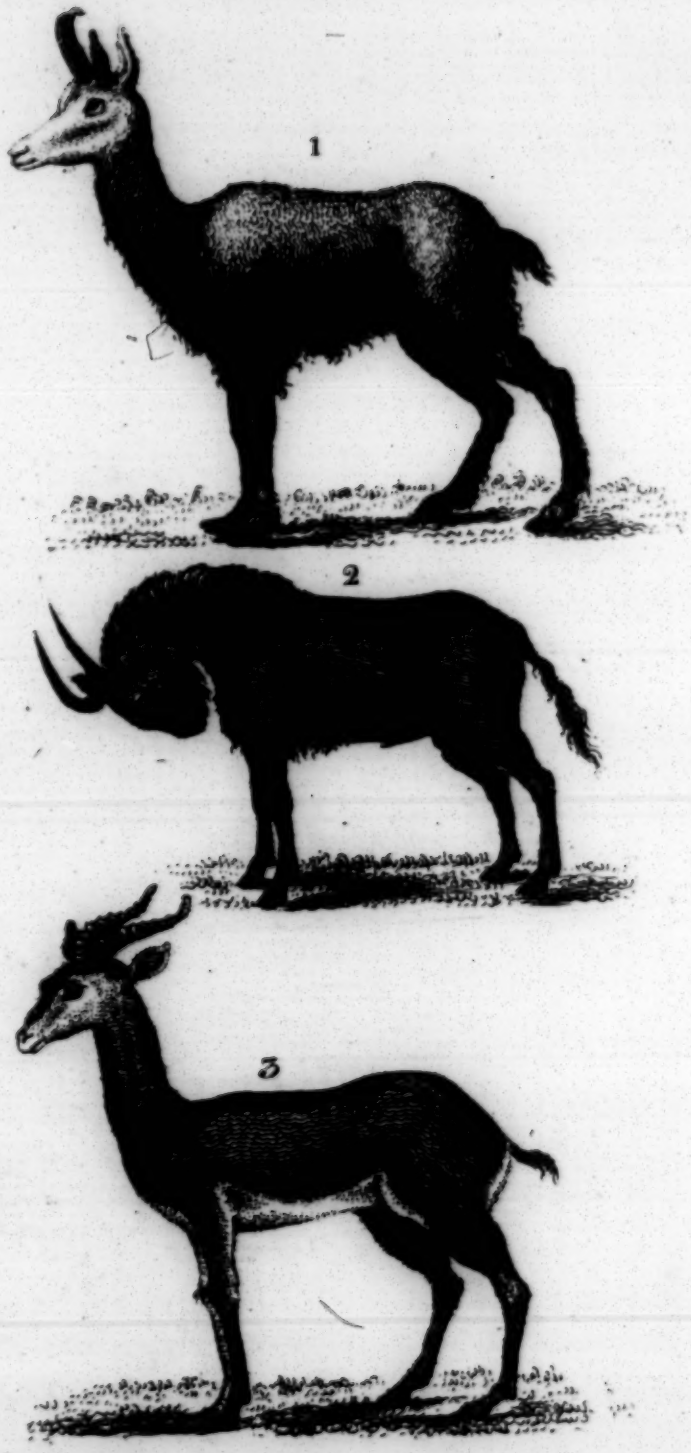
The genus of *antelopes* ſeem to occupy an intermediate place between the goat and the deer. They are almoſt confined to the regions of *Aſia* and *Africa*; few of them inhabit *Europe*; and none are found in *America*. The form of their limbs renders them amazingly ſwift and agile. They never ſhed their horns. They are ſo remarkable for beautiful eyes, that in the *Eaſt*, the moſt flattering compliment which can be paid to a fine woman, is to ſay, "She has the eyes of an antelope." They feed rather upon ſhrubby than upon graſſy paſtures. Their ſize reſembles that of the roebuck.—They aſſociate in large herds.

Species I.—*Gnu.*

The form of this animal reſembles * partly the horſe, partly the ox †, and partly the ſtag. It is as large as a middle-ſized horſe; the length of its body between five and ſix feet; its height between four and five. Its neck, though neither ſo long nor ſo ſlender as the neck of a horſe, is however longer and more ſlender than that of the ox, and adorned with a ſtiff erect mane. Its body diſplays the elegant proportions of the horſe; and its tail,

* Sparman, II. 131. † Hiſt. of Quad. I. 63.

Plate VII.



1. CHAMOIS 2. GNU 3. GAZELLE

tail, though ſomewhat longer, is, like that of the horſe, copiouſly furniſhed with long hair. But the head of the gnu is thick and large, and horned like the head of an ox. On the forehead, between the noſe and the flexures of the horns, the face is covered with an oblong ſquare bruſh of ſtiff black hairs, turned upwards. On the inferior jaw too, it has a beard of thick ſhaggy hair. Its legs are long, and elegantly ſlender, like the legs of the ſtag; the ſpace between the fore legs is covered with long buſhy hair. Its horns are rough; they riſe on the hinder part of the head; and, bending their direction forward for a ſhort way, almoſt cloſe to the ſkin, then turn ſuddenly upwards, and run back for a conſiderable length, ſo as to bear a near reſemblance in form to the ſickles commonly uſed through *Scotland* in cutting corn. The females are horned as well as the males; nor are the two ſexes diſtinguiſhed from each other by any difference of the horns. The horns of the young gnu are perfectly ſtraight; they acquire their flexure as the animal grows older, and *they* longer and thicker.

The *pori ceriferi* with which it is furniſhed under the eyes, are what chiefly entitles it to the character of an antelope.

The tail and mane of the gnu are of a light grey colour; the ſhag on its chin and its breaſt, and the ſtiff bruſh on its forehead, black; and the reſt of the body uniformly dark brown.

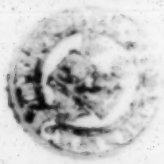
The gnu is a lively capricious animal. When irritated, even though at a diſtance from its enemy, it expreſſes its reſentment by plunging, curveting, flinging out its legs behind, and butting with its head againſt molehills, bars, and other ſimilar objects. Theſe animals feed in large herds; and it is only when a ſtraggler has been accidentally ſeparated from the herd, that any of them

is

is found in a ſolitary ſtate. The voice of this ſpecies has obtained it from the *Hottentots* the name of *gnu*; they ſometimes utter a ſound like the bellowing of an ox, and ſometimes a clearer note.

The gnu is an inhabitant of the ſouth of *Africa*. It is found chiefly in the diſtricts of *Camdebo* and *Agter Bruntjes-hoogte*. * *Dr. Sparrman* ſeems even to think that it is confined within thoſe regions.

The fleſh of the gnu is very juicy, and more agreeable and nouriſhing even than beef †.



Species II.—*Chamois*.

The chamois ‡ is nearly of the ſame ſize with the domeſtic goat. Its neck is ſlender; its forehead elevated; its horns ſlender, black and upright, with the points hooked backwards. Its tail is ſhort. Its hoofs are much divided. Its legs are long and agile; but not remarkably ſlender. Its ears are long, erect and pointed. Behind each of the horns, it has a large orifice in the ſkin of the head. The hair is rather ſhort on the upper part of the body; but upon the ſides, the haunches, the neck and the belly, long, like the hair of the common goat.

The body of the chamois is commonly, in ſpring, of a dun or aſh colour, which changes, in ſummer, to a yellowiſh brown, mixed with black; and in winter, aſſuming a darker ſhade, becomes deep brown. Its forehead is brown. Its cheeks, chin, and throat, with the inner ſides of the ears, are white. A black line runs along the back. The belly is yellowiſh.

The

* Travels, Vol. II. 134. † *Idem*, II. 133.

‡ The Rupricapra of Pliny; the antilope rupricapra of Pallas, and the laſt Edit. of the Syſt. Nat.

The chamois is one of the moſt ſprightly of animals. His ſight, ſmelling, and hearing, are amazingly acute. His voice is hiſſing. He is eminently ſwift; and his ſprightlineſs and timidity very often prompt him to exerciſe his velocity. When a perſon approaches in the direction in which the wind blows, he diſtinguiſhes him by the ſcent even at the diſtance of half a league. He expreſſes his ſenſe of the danger by hiſſing or whiſtling with great violence, ſtriking the ground with his feet, leaping, and looking eagerly about to diſcover the object of his fears; and at laſt running off with all the ſpeed he can exert. The chamois are ſocial animals, and feed together; ſometimes in pairs, and ſometimes in little flocks of from three to twenty in number. A chamois, when affrighted, communicates the alarm to his fellows by whiſtling, with the hiſſing voice peculiar to the ſpecies. The males and the females feed in ſeparate parties, except in the rutting ſeaſon. The chamois ſelects the higheſt flavoured herbs; and even culls, with the nice appetite of an epicure, the flowers and the tendereſt buds of his favourite plants. He eats the carline thiſtle and the genipay with great eagerneſs. Though rocks and precipices, and the ſummits of the loftieſt mountains that afford the ſhrubs and herbage in which he delights, are his favourite haunts; yet in winter he often finds it neceſſary to deſcend into the lower foreſts, and to content himſelf with pine leaves, and ſuch green or dry herbs as he can procure by ſcratching away the ſnow with his feet.

The female chamois receives the male at the age of eighteen months. The ſeaſon of love is in *October* and *November*; and the period of parturition conſequently in *March* and *April*. The venereal ardour of the male chamois exceeds even that of the ibex: he bleats eagerly, and runs wildly about from mountain to mountain in queſt

queſt of a miſtreſs. Generally two, but ſeldom three young ones are produced by the female at a birth.

The *Alpine* hunters carry on conſtant war againſt the chamois. The chace is however dangerous; as the animal climbs over rocks, ſprings from cliff to cliff, runs along the edges of precipices, and even leaps down their faces with the greateſt ſafety and facility.

The horns of the chamois are uſed as heads to canes. His ſkin, when dreſſed, forms a ſtrong ſupple leather, excellent for riding breeches, gloves and veſts. His fleſh is a valuable article of food. His blood is eſteemed a ſpecific againſt pleuriſies; and the qualities of purifying the blood and promoting perſpiration are aſcribed to it.

The *Alps* of *Dauphiny*, *Switzerland* and *Italy*; the *Pyrenæan* mountains, *Greece*, *Crete*, and the mountains of *Caucaſus* and *Taurus*, are all inhabited by the chamois. The numbers of this ſpecies are more conſiderable than thoſe of the ibex ſpecies. The chamois does not aſcend ſo near the ſummits of the lofty mountains which it inhabits as the ibex.

Species III.—*Blue Antelope* *.

This animal, denominated by ſome the blue goat, and by the *Dutch* coloniſts in the ſouth of *Africa*, *Blawe Bock*, ſeems to occupy a ſort of middle rank between the goats and the antelopes.

It is larger in ſize than any ordinary buck. Its horns are ſharp-pointed, taper, arcuated, and reclined backwards;

* The *Antilope Leucophæa* of Linnæus, Syſt. Nat. I. 182.

wards; they are twenty inches in length, and marked with twenty prominent rings, but ſmooth towards the points. The hair of the body is long. The tail is ſeven inches in length; and the hairs at the end of it ſeven inches. The colour of the hair, when the animal is alive, is a beautiful gloſſy blue; when dead, it takes a blueiſh grey colour. The belly is white; and under each eye, the face is marked with a large white ſpot.

This animal is a native of *Africa*, in the neighbourhood of the *Cape*; but ſeems to be confined within ſome diſtricts at a conſiderable diſtance from that promontary *.

Species IV.—*Egyptian Antelope.*

This is the *Antelope Oryx* of *Linnæus* †, the *Oryx* of the ancients, the *Paſan* of *Buffon*, and the *Gemſe Bok* or *Chamois* of the Dutch coloniſts at the *Cape of Good Hope* ‡.

The animals of this ſpecies are of the ſame ſize as our common domeſtic he-goat; but in figure, colour, and agility, chiefly reſemble the ſtag. The length of a ſkin which *Mr. Pennant* examined, was better than ſix feet ſix inches. The tail, which is covered with long black hairs, is, between the rump and the end of the hairs, two feet ſix inches long.

The belly, the rump, and the legs, are white; but each leg is marked below the knee with a duſky ſpot. The reſt of the body is grey or reddiſh; except that a black line runs along the back. The horns are almoſt

* Hiſt. of Quad. I. 66. Sparrman's Voyage, II. 219.
† Syſt. Nat. I. 189. ‡ Sparr. II. 217.

perfectly ſtraight; of a blackiſh colour; each about an inch and a half in diameter at the baſe, and diſtinguiſhed on the lower half by twenty or more prominent wavy rings, the upper half ſmooth, and tapering into a ſharp point. The diſtance between the points of the horns is fourteen inches.

This animal is found in the neighbourhood of the *Cape*. *Sparrman* * ſuppoſes it peculiar to the north-weſtern parts of the tract of country inhabited by the *Dutch* coloniſts. It is alſo an inhabitant of *Syria*, *Arabia*, *Perſia*, *India*, *Egypt*, and *Ethiopia*. It is ſuppoſed to be the *Zebi* of the Holy Scriptures. *Pliny* relates that the *Egyptians* had obſerved this animal to be particularly *affected* by the appearance of the dog-ſtar. Another circumſtance which he relates concerning the *Oryx*, ſhews that his knowledge of it was very imperfect. He gravely tells us, that its hair, inſtead of pointing, like that of other animals, towards the tail, lay in the contrary direction. *Mr. Paterſon* informs us, from his own obſervation, that the horns of this antelope are remarkably long and ſharp; and that, when attacked by dogs, it defends itſelf ſitting on its hinder quarters

Species V.—*Leucoryx*.

The Leucoryx is of the ſame ſize with a ſmall ox from *Wales* or the *Highlands* of *Scotland*. Its body is thick and clumſy; its limbs rather more elegantly formed; its noſe thick and broad, like a cow's; its ears ſomewhat ſlouching; its horns long, ſlender, ſlightly incurvated, annulated for a part of their length, black, and terminating

* II. 217.

nating with ſharp points. Its tail reaches to the firſt joint, and ends with a tuft.

The body of this animal is almoſt all over of a milk-white colour; only the middle of the face, the ſides of the cheeks, and the limbs, are tinged with red.

The iſland of *Gow Bahrein* in the gulph of *Baſſora*, is the native region of the leucoryx. *Mr. Pennant* * relates from a paper which he found in the *Britiſh* muſeum, that *Shah Sultahn Houſſein* kept ſome of this ſpecies as curioſities, in a park, at the diſtance of eight leagues from his capital. A foſſil horn from *Siberia* has been ſuſpected by *Dr. Pallas*, to have been produced on the head of a leucoryx. *Oppian*, as quoted by *Pennant*, deſcribes an animal under the name of *Oryx*, which ſeems to be no other but this antelope; though his deſcription be more particular than any that the works of modern naturaliſts afford of the leucoryx.

Species VI.—*Algazel.*

Buffon and *Pennant* agree in diſtinguiſhing this animal by the name here adopted: It is the *Antelope Gazella* of *Linnæus*; and ſome other naturaliſts have characteriſed it, by adding to its name, an epithet, ſignifying that it bears a bezoar.

There appears to be a conſiderable reſemblance both in ſize and in other particulars between the algazel and leucoryx. But, the horns of the algazel, though long, ſlender, and nearly upright, as well as the horns of the leucoryx, differ, however, from thoſe of the latter animal, in being gently arched, not backwards, but towards

* Hiſt. of Quad. I, 68.

each other. They are always annulated; but the inequalities produced by the rings on the ſurface of the horn are leſs remarkable in ſome than in others. The breaſt and the buttocks of this animal are white; the reſt of its body is red.

India, *Perſia*, *Egypt*, and *Ethiopia*, are the countries which produce the algazel. It is a gregarious animal. Along a plain it moves ſlowly; but climbs the ſides of hills with great vigour and velocity. It is extremely ſhy and timid; yet, when taken alive, is eaſily tamed. Autumn is its ſeaſon of love, and ſpring, of parturition. The oriental bezoar, a concretion once highly valued for its ſuppoſed medical qualities, ſtrongly odorous, and highly aromatic, was formerly thought to be obtained only from this animal. The bezoar, however, is at preſent regarded as a concretion, not peculiar to any one animal, but formed within many other animals of the *Eaſt*, and even of *Europe*.

SPECIES VII.—*Elk Antelope* *.

THIS is the *Indian* antelope of *Pennant*; the *Coudou* of *Buffon*; and the *Eland*† of the Dutch coloniſts at the *Cape of Good Hope*. From *Sparrman* we alſo learn, that it is denominated by the *Caffres*, *Empoſos* or *Poffo*, and by the *Hottentots*, *T'gann*.

In ſize and ſhape this animal bears ſome reſemblance to the elk, which will hereafter come to be deſcribed. The forehead of the elk-antelope is flat, and broad above the eyes; but from the eyes to the tip of the noſe, becomes

* *Antelope Oreas* of Linnæus. *Antelope Oryx* of Pallas.

† Sparrman, II. 204.

comes gradually narrower, till it terminates in a ſharp point. The breaſt is furniſhed with a dewlap covered with long hair. On the upper part of the forehead ſtands a top of erect hairs. A thin erect mane runs along the back, from the nape of the neck to the origin of the tail. The ears are long and pointed. Though the body is of a thick robuſt form, the legs are ſlender and elegant. The height of the animal is commonly between five and ſix feet. The horns are generally about two feet long, of a dark brown colour, having, each, from the baſe, for one-third of its length, three ſides, and three ridges or ribs ſeparating the ſides, with a ſpiral wreath running over both the ridges and the ſides: from the termination of the ridges and the ſpiral wreath, the reſt of the horn is round and ſmooth: both horns riſe almoſt in an upright direction; only their tops are ſlightly bent forwards. The hoofs are ſhort, and ſurrounded at their junction with the leg, with a circle of black hairs. The tail does not reach to the firſt joint of the leg, but is terminated with a tuft of long black hairs; the ſhort hair covering it is of an aſh colour.

The whole body, indeed, except the tuft at the end of the tail, the ſkin between the fetlocks and the hoofs, and the thin erect mane, is of a blueiſh aſh-colour tinged with red.

India, *Congo*, and the ſouthern parts of *Africa*, are the countries which afford theſe animals. Before *Sparrman*, no natural hiſtorian had given a deſcription of the elk-antelope from perſonal obſervation. That enthuſiaſtic ſtudent of nature had various opportunities, in his journey from the *Cape* into the interior parts of *Africa*, both of examining the form and appearance, and of obſerving the manners of this ſpecies.

They

They are gregarious; and are often ſeen in immenſe herds in the extenſive plains on the confines of *Caffraria*, north weſt from the *Cape* *. The induſtry of the *Dutch* coloniſts, who hunt them eagerly for their fleſh, hides, and tallow, has almoſt exterminated them from the diſtricts lying nearer that promontory †. Though the elk-antelope affords always a conſiderable quantity of tallow, and is generally fat and bulky; yet he is content with ſuch a moderate quantity of food as he can crop from ſhrubs and buſhes, without requiring large quantities of grain or graſs. When hunted, theſe animals always run, if poſſible, againſt the wind, and will even face the hunter rather than flee in a different direction. Their fatneſs and heavineſs render it difficult for them to run long, if hard purſued; and it is probable that they turn their faces againſt the wind, when purſued, from finding that in this direction they become not ſo ſoon inſufferably hot and breathleſs, as when their progreſs is aſſiſted by the force of the wind. Some of the hunters pretend that they have ſeen the elk-antelope, when fleeing with all ſpeed before a purſuer, exſude from his neck a bloody froth. Sometimes a mixture of melted fat and blood is ſeen to guſh, on ſimilar occaſions, from the noſtrils of the panting animal. At other times, even the younger and fleeter bucks are ſeen to drop down dead, when their ſtrength is exhauſted in flight.

The fleſh of the elk-antelope is excellent food. It is of a fine grain, very juicy, and taſtes deliciouſly. The breaſt eſpecially, is conſidered as a great delicacy. The fat of the heart is not only very copious, but ſo fine and tender as to be no bad ſubſtitute for butter; and the *Dutch* farmers at the *Cape* uſe it without ſcruple in dreſſing their victuals. The hide on the neck of the elk-antelope

* Sparrman, II. 209. † *Idem ibid.* and I. 131.

antelope is very thick and tough; and, next after that of the buffalo, makes the beſt traces for waggons, halters for oxen, field-ſhoes, &c. Both the *Hottentots* and the *Boſhiesmen* uſe the horns of the elk, with wooden ſtalks fitted to them, for tobacco pipes; from which they gulp up large draughts of ſmoke with the moſt eager avidity. A good drawing of one of theſe *African* tobacco-pipes is given in the firſt of the plates annexed to the firſt volume of *Sparrman's* voyage.

Species VIII.—*Harneſſed Antelope* *.

The *Guib* of *M. Buffon*, and *Bonte Bock* of the *Dutch* coloniſts at the *Cape*, has received from *Mr. Pennant* the denomination here adopted.

It is one of the large antelopes; being ſcarce inferior in ſize to the elk-antelope, though of a different ſhape. Its legs, like thoſe of the other antelopes, are long and ſlender; its neck rather long and round; its forehead broad, and ſomewhat prominent; its ears broad; its horns ſituated almoſt on the hinder part of the head, ſtraight, ſpiral, and flattened ſo as to have two angular ſides; its tail ten inches in length, and covered with long ſhaggy hair. The length of this animal, from the top of the noſe to the root of the tail, is about four feet and an half; the height, from the heels of the hinder feet to the back, two feet eight inches. The hair, over the whole body, is ſhort and ſmooth. The ears are bare within. The females have no horns †.

The ground colour of the body of this animal is a deep tawny. Beneath each eye, the face is marked with a white

* *Antilope Scripta* of Linnæus and Pallas. † Sparrman, I. 130.

a white ſpot. On each ſide, the body diſplays ſix tranſverſe, and two longitudinal ſtripes or bands, ſo regularly diſpoſed as to have the appearance of harneſſing. The thighs are marked with white ſpots. The cheeks and the under part of the neck are white.

This animal is very common in *Senegal*. It is gregarious. Large herds of harneſſed antelopes are ſeen ſpread through the plains and woods of the country of *Podor*. It inhabits the *South* of *Africa*, in *Zwellendam* and the adjoining diſtricts near the *Cape*; but appears not farther eaſt than *Zwellendam*, in thoſe regions, till you reach the country of the *Tambuki* *. The fleſh of the harneſſed antelope is not tender or delicate †.

Species IX.—*Guinea Antelope.*

This name has been affixed by *Mr. Pennant* to the animal which *Buffon* and *Linnæus* diſtinguiſh by the name of *Grimm*, in honour of the gentleman who firſt deſcribed it.

It is of a more diminutive ſize than moſt of thoſe antelopes which we have hitherto been deſcribing. It is about eighteen inches high; with ſlender legs; a conſiderable length of neck; rather a ſharp ſnout; its forehead ſomewhat prominent; large ears; duſky eyes, and under each a cavity into which a ſtrong-ſcented oily fluid is conſtantly ſecreted, and there becomes concrete; its horns not three inches long, ſlightly annulated at the baſe, and tapering gradually till they terminate, each in a ſharp point; and between the horns a tuft of black hairs, which ſerves as one of the moſt ſtriking characteriſtics of the animal.

* Sparrman, II. 213. † *Idem*, I. 277.

animal. The females are deſtitute of horns. The belly of this elegant animal is white; its tail, which is ſhort, white beneath, and black above; the reſt of the body of a yellowiſh brown colour.

Guinea is conſidered as the country of this ſpecies. It is chiefly from *Guinea* that the few individuals which have been ſeen in *Europe* have been procured. But *Dr. Sparrman*, in his Voyage to the *Cape*, mentions three different animals; the *ſteenbok*, the *gryſbok*, and the *klipſpringer*, all bearing ſome reſemblance of character to the *Grimm*, or *Guinea* antelope: And, if they are not all varieties of this ſpecies, ſome one or other of them may probably be the very ſame. But Dr. *Sparrman* did not find it convenient to examine theſe animals with ſuch accuracy as could enable him to decide concerning their character, or to deſcribe them with ſufficient exactneſs. They abound, however, in the neighbourhood of the *Cape*.

SPECIES X.—*Royal Antelope* *.

THIS little creature, denominated by *Buffon*, *Le Chevrotain de Guinea*, and by *Boſman*, *King of the Harts*, muſt ſurely have received the latter appellation, as well as that of Royal antelope, by way of irony; for it ſeems merely an antelope in miniature.

It is only about nine inches high; its legs are not thicker than a gooſe quill: the male has ſmall, ſtrait, black horns, ſmooth, ſhining as jet, and only two inches long; but the female is hornleſs: the ears are broad; the legs are long in proportion to the ſize of the body, and

* The *Antilope Pygmæa* of Linnæus.

very ſlender: the hoofs are divided; the horns are annulated; and the number of rings on a horn denotes the years of the age of the individual to which it belongs. The colour of this little creature is chiefly a reddiſh brown; but the belly is white; and the tail, which, though ſhort, is covered with pretty long hair, partly yellow, partly red, and partly white.

It is amazingly ſwift, it ſprings readily over walls twelve feet high, climbs the loftieeſt mountains, and is never caught without the greateſt difficulty; yet, when taken, and familiarized to mankind, it becomes very tame and mild. It is a native of *Senegal*, and the other hot regions of *Africa*; and ſuch is the tenderneſs of its conſtitution, that it can ſcarce bear tranſportation, and does not thrive in our colder *European* climates. It is called by the *Hottentots noumetjes*; it utters a long, ſhrill, warbling cry, amazingly loud for ſo diminutive an animal *. Its fleſh is one of the moſt exquiſite delicacies that can appear on the table of the *Epicure*.

Species XI.—*Indoſtan Antelope* †.

The moſt remarkable peculiarities of this antelope are horns bending forwards, a mane on the neck, a bunch on the back, and a long buſhy tail. It is the *Biggel* of *Mandleſloc* ‡ in his Travels, and is deſcribed by Dr. *Parſons* in the *Philoſophical Tranſactions*, as a quadruped brought from *Bengal*.

It is about five feet high: the hair covering the body is ſhort, ſoft, and of an aſh colour. The tail is two and twenty,

* Vaillant's Travels in *Africa*. Eng. Tranſ. Vol. II.

† The *Trogo-camelus* of Linnæus.

‡ Harris's Collection, I. 775.

twenty, and the horns, ſeven inches in length. It is furniſhed with a dewlap on the lower part of the breaſt, like a bull. The legs are of an elegant ſlender form. The neck reſembles that of the camel.

This animal is an inhabitant of the moſt remote parts of the *Mogul's* dominions in *India*: It is a ruminating animal. It lies down and riſes like the camel. Its voice is of a harſh croaking ſound.

SPECIES XII.—*The white-footed Antelope* *.

THE horns of this animal are ſhort, and inclined forwards; it is furniſhed with a mane extending along the neck, and half way down the back; its tail is long and buſhy; the male is marked immediately above the hoofs with one white ſpot on each of the fore, and two on each of the hinder feet. The body is of a dark grey colour; the ears are large, and ſtriped with black; the mane is black, and a tuft of long black hairs hangs down the fore part of the neck. The female of this ſpecies is deſtitute of horns, and has her feet marked immediately above the hoofs, with three black, and two white bands.

This antelope meaſures, at the top of the ſhoulders, four feet and one inch in height, and from the lower end of the neck to the anus, four feet in length.

This ſpecies, like the preceding, are native inhabitants only of the remote parts of *India*. They exiſt both in a wild and a tame ſtate. In a domeſtic ſtate, they refuſe not oats, but prefer graſs and hay, and eat wheaten bread

* *Antilope picta* of Linnæus; *Nyl Ghau* of Dr. Hunter in the Philoſophical Tranſactions.

with great fondneſs. Even in confinement, however, their manners are not uniformly mild. They ſometimes run with ſudden fury againſt ſuch as approach them, and often attack each other with amazing cunning and impetuoſity. The males, in fighting, are accuſtomed to drop on their knees at a diſtance; to approach in that attitude; and, when near, to ſpring on each other with the utmoſt violence. In the reign of *Aureng Zebe*, they were numerous between *Delli* and *Lahor*, on the way to *Cachemire*. That monarch uſed frequently to purſue them in the chaſe. An army of hunters ſurrounded the ſpace in which the animals were feeding, with nets; which were drawn ſtill cloſer and cloſer, till they were at length confined within a narrow precinct. The monarch and his courtiers then entered the circle, and, attacking the antelopes with arrows, ſpears, or muſkets, made often ſo prodigious a ſlaughter, that the carcaſes were ſent in preſents to the great men, through all parts of the empire.

In conſequence of our connexions with *India*, animals of this ſpecies have been often imported into *England* *, and have even copulated and produced young here. Two young ones are ſometimes produced at a birth; and the period of geſtation is believed to be nine months.

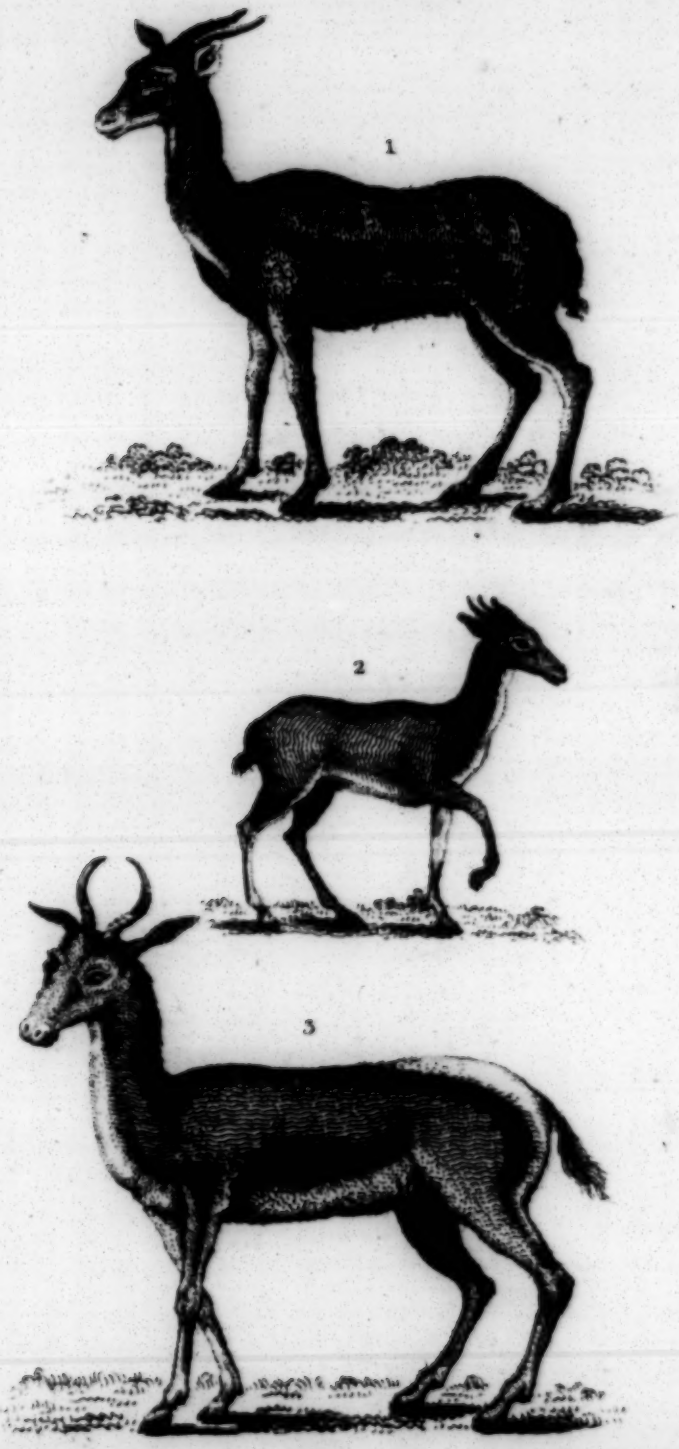
SPECIES XIII.—*Swift Antelope* †.

THIS animal is chiefly diſtinguiſhed by having the extremities of its horns bent forwards in the ſame manner

* Hiſt. of Quadrupeds, I. 75.

† The *Dama* of Pliny, the *Nanguer* of Buffon, the *Antilope Dama* of Linnæus.

Plate VIII.



1.HARNESSED ANTILOPE 2.RED ANTILOPE 3.SPRING BOK

ner as thoſe of the chamois bend backward. The ground colour of its body is tawny; but the belly, the lower part of the ſides, the rump, and the thighs, are of a pure white. The fore part of the neck is alſo marked with a milk-white ſpot. The individuals of the ſpecies, however, are not all uniformly coloured. The horns are eight inches in length, black and round. The length of the body is commonly about four feet; and its height approaches to three. Both ſexes have horns.

Senegal is the native country of this ſpecies. They are timid and gentle, eaſily tamed, but ſo amazingly ſwift, that they ſeem to need neither defenſive weapons nor ferocity of manners to protect them from the tyranny of mankind. The velocity of their flight has been compared by *Ælian* to the awful impetuoſity of a whirlwind.

Species XIV.—*Red Antelope* *.

This animal reſembles the roebuck in ſize. It is about four feet in length, and in height two feet three inches. Its horns are five inches and a half long, almoſt ſmooth,—only with one or two ſlight rings at the baſe, and bent forwards at the point, but not ſo much as thoſe of the Nanguer: its body is all over of a pale red colour; its ears are longer than its horns.

This ſpecies is peculiar to *Africa*. They abound in the country of *Senegal*, and in the neighbourhood of the *Cape*. *Sparrman* ‡ conſiders the *ſteenbock* as a variety belonging to this ſpecies, diſtinguiſhed by a white ſpot over the eyes.

* The *Nagor* of Buffon, the *Antilope Redunca* of Linnæus.

‡ II. 224.

Species. XV.—*Striped Antelope.*

This animal, the *koedoe* * of the *Dutch* coloniſts at the *Cape* of *Good Hope*, the *Condoma* of M. de *Buffon* †, and from the form of its horns, the *ſtrepſiceros* ‡ of ſome other writers, is of a beautiful tall figure, with long ſlender ſhanks; and though of a leſs clumſy and heavy form, larger than the *elk antelope*. The male *koedoe* is diſtinguiſhed by large ſpiral horns, with a ridge following the wreath, compreſſed ſideways, conſiſting of three flexures, and meaſuring often between four and five feet. The female is deſtitute of horns. The body of the animal is commonly nine feet long, and four in height: its predominant colour is a ruſty brown; the face is marked with two white lines originating one from the corner of each eye. A browniſh white ſtripe extends along the ridge of the back. Eight or nine white ſtripes run down the ſides. The poſterior part of the belly, with the fore part of the hinder leg, are alſo white. A ſhort mane adorns the upper part of the neck. A few long hairs hang between the throat and the breaſt. The tail is brown above, white beneath, and two feet in length. The mouth of the *koedoe* is furniſhed with cartilaginous proceſſes reſembling tuſks.

This ſpecies inhabit the *ſouth* of *Africa*. They are well known to the *Dutch* coloniſts at the *Cape* of *Good Hope*, and have not eſcaped the notice of the curious travellers from *Europe* who have viſited that region. Shrubs and low buſhes afford their favourite food. Though their form ſeems to promiſe agility and ſpeed, yet are they ſaid to run ſlowly, and to become ſoon fatigued.

* Sparrman, II. 213 † Smellie's Buffon, VII.

‡ Linnæus, Pallas, Schreber.

tigued. No other antelope is ſo eaſily overtaken by the hounds. But when the foe approaches, the male turns, and bravely defends himſelf with his horns. The female, though not furniſhed with theſe weapons of defence, is not ſwifter than the male. The fleſh is excellent food, the marrow delicious.

SPECIES XVI.—*Common Antelope.*

THIS denomination is adopted from *Pennant* * for the *antilope cervicapra* of *Linnæus*, and the *antelope* of *Buffon*; becauſe this ſpecies has been moſt frequently, and for the longeſt ſpace of time, diſtinguiſhed by naturaliſts, at leaſt in Britain, as belonging to the genus of Antelopes.

The animals of this ſpecies are ſomewhat inferior in ſize to the fallow-deer. The general colour of their body is a duſky brown, mixed with red. The belly and the inſide of the thighs are white. The orbits of the eyes are likewiſe white; and a white ſpot marks each ſide of the forehead. The horns are about fourteen inches long, marked with diſtinct rings nearly to the points, and bended, by a double flexure, into a form reſembling that of the ancient lyre †. The females are without horns.

Barbary and *India* are the regions which this ſpecies is known chiefly to inhabit. The female goes nine months with young, and produces only one at a birth ‡.

Bengal, as we learn from travellers, affords a variety of this ſpecies, the horns of which reſemble thoſe of the common antelope of *Barbary*; but its face, back, and ſides, are of a very deep brown colour; its belly and the inſide

† Plin. Hiſt. Nat. lib. xi. ſect. 45. ‡ Syſt. Nat. I. 193.

inſide of its legs are white; its tail is black above and white beneath; and its ſize ſuperior to that of the laſt variety. Mr. *Pennant* diſtinguiſhes this animal by the epithet *brown*, and conjectures that it may be the ſame with the *Lidmee* of *Barbary*, mentioned by Dr. *Shaw* in his Travels.

In the cabinet of the *Marquis de Marigny* *, in the *Muſeum* that was lately Sir *Aſhton Lever's* †, and in Mr. *Pennant's* cabinet of natural curioſities, there are ſeveral horns which appear to have belonged to a third variety of this ſpecies. They are of a ſpiral form, but ſmooth and black. Two are joined in a parallel direction, with the points turned different ways; and we learn, that, joined in this manner, theſe horns are carried by the *Fakirs* and *Santons* in *India*, as a ſort of weapon, and an enſign of dignity. With the animals which afford them our *European* naturaliſts are as yet but imperfectly acquainted.

Species XVII.—*Barbary Antelope* ‡.

This ſpecies, the *gazelle* of *Buffon*, are diſtinguiſhed by horns about a foot in length, firſt reclining backwards, then bending in the middle, and reverting forwards, annulated with about thirteen rings,—of which thoſe neareſt the baſe encircle the whole horns, but thoſe approaching to the point are only half rings, and alſo furrowed longitudinally. In ſize and figure theſe animals nearly reſemble the roebuck. The colour of the upper part of the body is a reddiſh brown; the buttocks and the lower parts

* Smellie's Buffon, vi. 413. † Hiſt. of Quadr. I. 80.

‡ The *Capra Dorcas* of Linnæus, Syſt. Nat. I. 187.

parts are white: a ſtrong duſky line divides the brown from the white. Each knee is furniſhed with a tuft of hair. The tail is black above, and white beneath.

This ſpecies are gregarious. In *Barbary*, *Egypt*, *Arabia*, and *Syria*, they are ſeen in numerous herds. The *Barbary* antelope is, moſt probably, the *Dorcas* of *Ælian*, and the *Diſchon* of *Moſes*.

Species XVIII.—*Kevel* *.

This is the *flat horned antelope* of *Pennant*; the *kevel* of moſt other writers.

Its horns are, like thoſe of the laſt ſpecies, marked with rings, from fourteen to eighteen in number; but inſtead of being round, they are flattened on the ſides. It is equal in ſize only to a ſmall roebuck. In other reſpects, it bears an exact reſemblance to the *antelope* of *Barbary*. Both females and males are furniſhed with horns.

Theſe animals are known for inhabitants both of *Senegal* and of *Perſia*. They herd together, and are eaſily domeſticated. Their fleſh is juicy, and of a very agreeable reliſh. The *Perſian* name is *Dſhairan*.

Species XIX.—*Springer* †.

The horns of this ſpecies are ſeven inches long, of a deep black colour, annulated near the baſe, but ſmooth

* The *Abu* of *Kæmpfer*; *antilope kevella* of the Syſt. Nat.

† The *antilope pygarga* of the Syſt. Nat. The *ſpringbock* of the *Dutch* at the *Cape* of *Good Hope*.

towards the points, for more than one half of their length. They riſe from the baſe, almoſt in an upright direction; but as they advance, bend gently towards the ſides; forming, each, with more than the upper half of its length, a beautiful curve. The horns of the two ſexes are ſimilar both in ſize and ſhape. The ears are ſix inches and a half in length. The whole length of the animal, from the noſe, is but a very little more than four feet. The tail is ſomewhat leſs than a foot long, and towards the extremity very ſlender, and covered with a few dark brown hairs, from one to two inches and an half in length. The eyes of this antelope are highly beautiful; but the face is not marked with *pori ceriferi* under them. Brown is the predominant colour of the body of this animal. The face, the belly, and the rump are white. A white liſt, which the animal can expand at pleaſure, extends from the tail half way up the back. The lighter brown of the neck and ſides is ſeparated from the white parts of the body by brown ſtripes of a much deeper ſhade. The ears are aſh-coloured, and partly covered with very ſhort hairs, partly bare.

Theſe antelopes are inhabitants of *Africa*. In ſeaſons of extreme drought, they advance from the northern interior parts of that continent towards the *Dutch* ſettlements, and proceed ſtraight forwards till they penetrate to the ſea. When their progreſs is ſtopped by this barrier, they return by the ſame road. They journey in immenſe herds. Dr. *Sparrman* * ſhot one of a herd of about two thouſand, that came all to drink at the ſame well. Mr. *Vaillant* †, on his return from viſiting the *Gonaqois* and the *Caffres*, to the *Cape*, travelled a while in the middle of a herd of theſe animals, migrating in ſearch

* Voyage II. 82. † *Travels in Africa*. Engliſh Tranſ. II. 323.

ſearch of water and cool ſhelter; the number of which he eſtimates at much more than fifty thouſand. He, with his dogs, oxen, carriages, and attendants, travelled in the midſt of the herd, without giving them any alarm. He ſhot among them and killed three, without ſcattering the reſt. So peaceable, ſo inſenſible to danger, is the ſpecies, or ſo difficult is it for inviduals wedged into ſo immenſe, unwieldy a herd, to ſave themſelves by flight. Hyænas, lions, and other beaſts of prey, attend them on their march, and thin their numbers with eager rapacity. The Hottentots call them the lion's flocks of ſheep.

The form of the ſpringer is remarkably elegant. Its manners are mild and playful. It runs with conſiderable velocity; and its race is frequently interrupted by a bound, to the elevation perhaps of two yards. At that height, the animal ſeems to ſuſpend itſelf for a few moments in the air; ſometimes expands the white liſt on its back, and by drooping its head, and gathering its feet together, raiſes that part into a convex form; and, at other times, depreſſing its belly, ſinks its back into a concavity, till the rump and the neck almoſt meet.

It would appear that the emigratious of the ſpringers are not regularly periodical. They forſake tracts of country which are defolated by drought, or which they have bared of herbage, for others where they may find water and paſture. According to Dr. *Sparrman's* account, they are quickly diſperſed before the purſuer, when aſſembled in moderate herds. Their fleſh is juicy, and of a good taſte. In the collection of living animals kept by the *Dutch* governor, there are many of this ſpecies *; yet their economy is very imperfectly known. *Sparrman* gives a fine figure of a ſpringer.

* Sparrman, II. 84.

It appears that there are different varieties of the ſpecies. *Sparrman* relates, that the horns are ſometimes reclined backwards, ſometimes bent forwards. Mr. *Pennant's* white-faced antelope, which he deſcribes, from a ſpecimen in the *Leverian Muſeum* as a ſeparate ſpecies, differs ſo very little from the ſpringer in ſize and colours, and reſembles it ſo exactly in ſhape, that I cannot view it as any other than a variety of this ſpecies.

The diviſions and ſubdiviſions of method are of great utility in making us acquainted, and in enabling us to maintain our acquaintance, with the objects of nature; but when endleſsly multiplied, they perplex and bewilder. The circumſtances of mankind and other animals are ſo various, the accidents to which they are liable are ſo numerous, that diverſities of complexion, form and manners, may be almoſt always expected in the ſame race; and even of the ſame animal the ſize and appearance generally vary in mature age from what they were in youth. In ſo numerous a family as that of the *ſpringbocks*, ſhall there be no individual forms or characters? Shall that admirable union of uniformity and variety which adorns the other parts of nature not be here diſplayed?

SPECIES. XX.—*Chineſe Antelope* *.

THIS ſpecies, the *Tzeiran of Buffon*, the yellow goat of *Da Halde*, in his account of *China*, called by the *Mongals Dſeren*, by the *Chineſe Hoang Yang*, and *Whang Yang*, are diſtinguiſhed by yellow annulated horns, nine inches long, diverging much near the points; but having theſe

* The *Antilope Gutturoſa* of *Linnæus*.

theſe turned towards each other. The body is nearly four feet and an half long, and in height two feet and an half. The head is of a thick form, and the noſe blunt, and convex above. The ears are ſmall and ſharp-pointed. The ſtructure of the windpipe forms a remarkable protuberance on the neck. The pits in the groin are uncommonly large. The tail is ſhort. The females are deſtitute of horns. From the beginning of May, the period at which the animal changes its coat, the hair continues, through ſummer, ſhort, cloſe, and tawny. As winter advances, it becomes long, rough, and hoary.

Theſe animals abound in the deſerts inhabited by the *Mongal Tartars*, and through all the wide tract of coun- between *Thibet* and *China*. They are likewiſe among the animals hunted by the *Buratti*, and are ſpread through the country between *Tangut* and the borders of *India*. They aſſociate in herds. Low rocky hills and dry ſunny plains are their favourite haunts. They ſelect the ſweeter plants. They avoid woods and water with the moſt fearful ſolicitude. In running and leaping, they exhibit amazing agility, and are almoſt indefatigable. When taken young, they are eaſily tamed. The young are produced ſo late in the ſeaſon as in the month of *June*. They are not leſs watchful of their ſafety than ſwift. But notwithſtanding their vigilance and velocity, they eſcape not the *Mongal* hunters. They ſpy out the herd from an eminence, ſurround them ſecretly, and eaſily ſhoot them attempting to eſcape. When one of the herd breaks through, all his companions follow in a ſingle line *; whatever the obſtacles which oppoſed their paſſage; however certain the dangers into which they run. The hunters uſe a ſort of whizzing arrows with

* Bell, I. 355.

with broad heads, and having a round piece of bone with holes upon the ſhaft; the noiſe of which contributes much to ſtupify and confound the animals.

Species XXI.—*Saiga* †.

Saiga is a denomination much more frequently applied to this ſpecies than *Scythian Antelope*, the name adopted by *Pennant*. *Linnæus* and *Buffon* agree in uſing it.

Theſe animals have ſemi-pellucid horns, of a pale yellow colour, about eleven inches long, and annulated for the greater part of their length, but ſmooth at the points. In the figure and ſize of its body, the *ſaiga* bears a conſiderable reſemblance to our domeſtic goat. Its head is rather large; its noſe is very cartilaginous, thick, and arched, and riſes nearly to the eyes. The ears are ſmall: The neck ſlender, but prominent above the throat. In ſummer the hair on the back and ſides is ſhort and cloſe; its colour, grey mixed with yellow; but the inferior part of the neck, and the body, white. In winter, the hair becomes long, rough, and hoary. The knees are tufted. The tail is four inches long, and naked below, but clothed above with erect hairs, terminating in a tuft. The females are without horns. The male has ſometimes three horns, and ſometimes, but very rarely, one.

Theſe animals inhabit the regions included in the ancient *Scythia*; from the *Danube* and *Dnieper* to the banks of the *Irtiſh*; through *Poland*, *Moldavia*, and the leſſer *Ruſſia*; on the ſhores of the *Euxine* and *Caſpian* ſeas, on the banks of the lake *Aral*, and of the river *Volga*. They feed in herds; they copulate in the end of *November*;

† Syſt. Nat. I. 185.

ber; and during the ſeaſon of love, the male is bold and faithful in defence of the female. The period of parturition is between the beginning and the middle of *May*. Never more than one is produced at a birth. The Saiga is a timid animal, amazingly acute in its powers of ſmelling, very ſwift, but ſoon fatigued; and its voice a bleating ſound, like that of the ſheep.

Sunny plains, abounding in ſalt ſprings and acrid aromatic plants, are their favourite haunts. In ſummer they feed in the more northern parts of that extenſive tract of country through which they are ſpread. In the rutting ſeaſon, in the end of autumn, they migrate ſouthward. In their progreſs into the ſouthern deſerts, they join in vaſt herds. Returning northward in ſpring, they divide into ſmall parties. Like many other gregarious animals, they are watchful of the common ſafety. Centinels appear to be placed when the herd reſts, and to relieve each other regularly.

They are objects of the chace. Their fleſh, their horns, their ſkins, are all valuable. The huntſmen muſt approach them againſt the wind, and beware of wearing ſuch glaring colours as red or white.

The Saiga is ſuppoſed to be the *Kolos* of *Strabo*, which he deſcribes as white and ſwift, and of an intermediate ſize between a ſtag and a ram; adding ſome fabulous ſtories concerning its noſe.

SPECIES XXII.—*Corine* *.

THIS ſpecies have very ſlender horns, not marked with rings, but with circular *rugæ*. In ſize they are ſmaller than the roebuck. The neck, the body, and the flanks are

* The *Corinna* of the Syſt. Nat.

are tawny; the belly and the inside of the thighs white, and separated from the sides by a dark line. The ears are large. A white, and beneath it a black line, marks each side of the face. The knees are furnished with tufts of hairs.

Senegal is the country of this animal. Its colour, its velocity in running, and agility in leaping, have induced some * naturalists to suspect that it might be the female of the *Kevel* or flat-horned Antelope. But its horns are remarkably different from those of that species.

Species XXIII.—*Cervine Antelope* †.

The animal to which we have adopted from *Pennant* the name of Cervine Antelope, is the *Bubalus* of the ancients, and the *Hartebeest* of the *Dutch* at the *Cape of Good Hope*.

The horns of this Antelope rise almost from one base, and widening as they advance, bend, first forwards, and then, after rising for a considerable length, almost in an upright direction, turn their points backward. Measured along the exterior curvature, they are from six to nine inches in length: they are annulated nearly to the points; entirely of a deep black colour; and common to both sexes.

The *hartebeest* is somewhat above four feet in height. A cinnamon colour predominates over its body. The forehead is covered with black and brown hairs intermixed. A broad black streak extends over the hinder part of the haunch, down the thigh, as far as to the knee. The anterior parts of both the fore and the hinder legs are also marked with black. Two narrow stripes of the

* Pallas and Gmelin. † *Antilope Bubalis* of the Syst. Nat.

Plate IX



1. WHITE FOOTED ANTELOPE 2. NACOR 3. CORINE

the ſame colour, riſe one behind each ear, and run nearly together along the ridge of the back. The *pori ceriferi* under the eyes are exceedingly ſmall. The face exhibits at leaſt the rudiments of a beard and whiſkers. The tail reaches nearly to the joint of the leg; it is covered with long briſtly hairs, but does not terminate in a tuft. The legs are of the ſame ſlender and elegant form as thoſe of the other antelopes. The buttocks are finely rounded. The ears are aſinine. The head is large, and the forehead high. The animal has no teeth in the upper, and only eight in the lower jaw.

This ſpecies are natives of *Africa*. Naturaliſts have become acquainted with them in *Barbary*, and in the neighbourhood of the *Cape*. The ancient *Romans*, who ranſacked almoſt every foreſt aud range of mountains through the known world, for wild beaſts to exhibit in the *Circus*, were not ſtrangers to this animal. *Pliny* mentions the *Bubalus* as an inhabitant of *Africa*, and as ſomewhat between a calf and a ſtag in form *. The ſame animal ſeems to be a native of *Arabia*. Travellers tell, that its young are eaſily tamed, and aſſociate readily with other cattle †. The *Arabian* name is *Bakar Uaſch*, or *Bekker el Waſh*. The inhabitants at the *Cape* are familiarly acquainted with theſe antelopes. They have not indeed attempted to domeſticate them; but they often purſue and ſhoot them in the chace. Herds of *Hartebeeſts* range through all the diſtricts in which the *Dutch* coloniſts are ſettled. Sometimes a ſolitary individual or a ſingle pair are met with. Even at its full ſpeed, the *hartebeeſt* ſeems to gallop with a heavy pace: Yet, its motion is not ſlower than that of any other of the large antelopes. When purſued, it often turns and gazes on

* Hiſt. Nat. VIII. 15.

† Shaw's Travels, p. 242.

its purſuer. Fighting, it drops on its knees like the gnu, in order to ruſh on its antagoniſt with the greater impetuoſity.

Its fleſh is ſomewhat dry, but of a fine grain, and of an agreeable high flavour. The *Dutch* coloniſts make handſome ſpoons of its horns. The cerumen which oozes from its *pori ceriferi*, is eſteemed by the *Hottentots* as a rare and excellent medicine.

I am diſpoſed to conſider the *Senegal* antelope * of Mr. *Pennant* merely as a variety of this ſpecies. Its head, its loins, its ears, are all nearly of the ſame form as thoſe of the cervine antelope. Its tail is in the ſame manner covered with coarſe briſtly hairs. The whole ſkin is ſeven feet in length. But if it have a mane, as Mr. *Pennant* repreſents, that no doubt affords reaſon for ranking the animal as a diſtinct ſpecies. It is an inhabitant of *Senegal*. The *French* call it *La grande vache brune*.

Species XXI.—*Kob, or Gambian Antelope*†.

This ſpecies bears a conſiderable reſemblance in ſhape and colours to what we have conſidered as a ſecond variety of the laſt ſpecies. Its horns are thirteen inches long, and annulated with eight or nine rings, but ſmooth at the points. Its ſize is equal to that of the fallow-deer. Its fore legs have the knees protected by a covering of long hairs.

It is an inhabitant of *Gambia* and *Senegal* in *Africa*: one of the moſt timid animals of the kind: when purſued, it heſitates not to throw itſelf down rocks and precipices.

* Hiſt. of Quad. I. 91.

† The *Lerwia* of the Syſt. Nat: *Fiſktall* or *Lerwee* of Dr. Shaw, p. 253.

Species XXII.—*Boſch-bock* *, or *Wood Antelope.*

This animal is ſomewhat more than two feet and an half in height; its body apparently more bulky in proportion to its height than the bodies of the other antelopes; its back is ſtraight; its buttocks not rounded; a perpendicular line might be dropped between the origin of the tail and the hoofs of the hinder feet. A narrow line of long white hairs, forming a ſlight mane, extends along the neck, the back, and even the tail. The predominant colour of the body is a dark brown. The ſhoulders and a part of the fore ribs are of a ſtill darker brown than the reſt of the body. The ears are five inches long, and without, of a foot colour, but on the inſide grey. The haunches and the ſides are marked each with about nine or twelve white ſpots. The belly is marked with two large ſpots; one immediately behind the fore, the other immediately before the hinder legs. Another white ſpot diſtinguiſhes the lower part of the neck. The fore legs are white from the knees to the paſterns. Like other antelopes, the boſch-bock has foreteeth only in the lower jaw. Its horns are black, of a triangular yet ſpiral form, roughened at the bottom by an infinite number of wavy rings, conical and ſharp at the points,—and have the extremeties ſometimes light coloured and tranſparent. They are about ten inches in length, extend upwards almoſt in a line with the forehead, but recede a little backwards and from each other at the middle, and then turn the points gently forwards. The female has no horns. The ſkin of an animal of this ſpecies meaſured, from the horns to the rump, four feet;

* *Antilope ſylvatica of* Sparrman in the *Swediſh* tranſactions, and of the *Syſt. Nat.*

and from the top of the back to the hoof, three-and-thirty inches.

Theſe animals are known to inhabit the foreſts of *Groot Vader-boſch*, *Houtniquas-boſch*, and perhaps *Sitſikamma* near the cape of *Good Hope*. They avoid hills and open plains, and confine themſelves to woods and groves.

The cry of the *boſch-bock* reſembles the ſhort, low, hoarſe, interrupted growlings of a dog or tiger. It frequently ravages vineyards and kitchen gardens. It diſcovers great ſagacity and addreſs in avoiding the ſnares, traps, and ambuſcades laid for it. Dr. *Sparrman* * relates, that he watched a whole night in a vineyard which was viſited by *boſch-bocks*; but the animals, though they ſeemed to have made their uſual evening meal on the vines, eſcaped undiſcovered. This creature runs ſo ſlowly, that the dogs ſometimes overtake him. But he generally ſells his life dear. When he perceives it impoſſible to eſcape by flight, he turns upon his purſuers, kneels down, that he may butt with greater impetuoſity, and generally kills or gores the beſt and boldeſt of the dogs. His horns, though his chief inſtrument of defence, are ſometimes entangled among buſhes and low branches of trees, and thus prove fatal to him, by ſtopping his flight, till his enemies ſurround him. To avoid this, he elevates his noſe as he runs, and reclines his horns on his neck. In woodlands, however, experience enables him to make his way with ſo much more dexterity and ſpeed than dogs, that they generally loſe ſcent of him in a ſhort time. The female being deſtitute of horns, runs with more ſecurity in woods and foreſts than the male. She never therefore leaves the woods to make her eſcape through the plain; and being of a lighter form than the male,

* I. 276.

male, dogs are ſeldom able to ſurpriſe or overtake her. The *boſch-bock* is monogamous.

The breaſt of the female is plump and fleſhy; but the reſt of the bodies of theſe animals does not afford tender or delicious food. Such at leaſt is *Sparrman*'s account. But if this be "the blackiſh brown antelope, of the ſize "of our *European* goat," which *Vaillant* * mentions, nothing can, in his eſtimation, be more delicious eating.

* Travels in *Africa*, Vol. I. p. 155. Eng. Tranſ.

GENUS VII.—*Deer.*

ALMOST the whole family of antelopes are confined within the warm climates of *Aſia* and *Africa*: None have penetrated into *America*, and only a very few ſpecies are thinly ſcattered through ſome parts of *Europe*. But the genus whoſe forms and manners we now proceed to examine, appears to have been deſtined to inhabit the colder regions of the earth. Its principal ſpecies are to be found amid the dreary foreſts, the eternal ſnows, the bleak mountains, and the barren wilds of the *Arctic* world. They are more numerous in *Europe* and *America* than in the other diviſions of the globe. A warm temperature is equally unpropitious to the nobler ſpecies of deer, as a cold temperature to the antelope.

Deer being among the ruminant quadrupeds, have eight cutting teeth in the inferior, but none in the upper jaw. Their horns are upright, ſolid and branchy, and are annually loſt and renewed. Did we not confide in the wiſdom of the author of nature, we might be tempted to cenſure the form of thoſe horns as awkward and inconvenient. Sometimes they ſpread into broad palms, which ſend out ſharp ſnags around their outer edges; ſometimes they divide fantaſtically into various branches, part of which project over the front, while others are reared upwards in the air; and ſometimes they are ſo reclined backwards, that the animal ſeems almoſt forced to bear its head in a ſtiff erect poſture: Yet, they communicate an air of grandeur and magnificence; they ſeem living trees planted on the head of a living animal.

Species I.—*Elk* *.

This animal exhibits a ſtately but awkward form; vaſt length of legs; a ſquare body of diſproportionate bulk; a ſhort tail; ſhoulders ſomewhat elevated; a long projecting ſnout, furrowed in the middle, with wide noſtrils; a ſhort neck; a mane almoſt erect, extending along the neck and ſhoulders; a ſmall excreſcence under the throat, with a tuft of hair hanging from it; long, ſlouching, aſinine ears; and horns without brow antlers, but with ſhort beams ſpreading into broad palms, which are on the inner ſide plain, but on the exterior ſide, furniſhed with ſharp ſnags. The female, wanting horns, appears, ſtill more than the male, though of a ſmaller ſize, mere awkward bulk, without dignity, and without animation. The greateſt height of the elk is ſeventeen hands; his greateſt weight one thouſand two hundred and twenty-nine pounds. Mr. *Pennant* informs us † that he has ſeen in the houſe of the *Hudſon's-bay* Company, a pair of elk's horns, thirty-two inches long, and fifty-ſix pounds in weight.

A hoary brown is the general colour of the body of this animal; his mane is light brown; his tail is duſky above, white beneath.

Europe, *Aſia* and *America* all afford this ſpecies.

They were not unknown to the ancient Romans. *Cæſar* mentions the *Alce* as an inhabitant of the *Hercynian* foreſt; larger than the roebuck; deſtitute of horns; without joints in its legs; and incapable of lying down on the ground,

* The *Alce* of *Cæſar*; *Alce* and *Machlis* of *Pliny*; *L'Elan* of *Buffon*; *Elk* and *Mooſe-Deer* of *Engliſh* Writers; *Orignal*, or *Orirnac* of the native Canadians.

† Arctic zoology, I. 17.

ground, or of reſting in any other manner, than by reclining againſt a tree. The hunter, he tells us, uſed to obſerve the haunts to which the *Alces* reſorted; and to cut the trees againſt which they were accuſtomed to lean, almoſt through, leaving them ſtanding, but inſufficient to ſupport any weight. When the *Alce* returned to reſt, the tree gave way; and he falling with it to the ground, became an eaſy prey to his artful enemy. Some of theſe particulars are referable only to the female *elk*; others are abſolutely fabulous: But *Cæſar*'s opportunities of information were partial; and the actual appearance and real œconomy of the animal might eaſily enough give riſe to the fabulous part of his relation. *Pliny* repeats the information communicated by *Cæſar*, but renders the hiſtory of the animal more perplexed by new fables, and by an unneceſſary variety of names*.

On the old continent, the elk is at preſent known for an inhabitant of *Lapland*, *Norway*, *Sweden*, *Poland*, *Ruſſia*, *Siberia* and *Tartary*, as far as the north of *China*†. In the new world, this ſpecies inhabit the iſle of *Cape Breton*, *Nova Scotia*, the weſtern ſide of the bay of *Fundy*, *Canada*, and the country round the great lakes, almoſt as far ſouth as the river *Ohio*.‡

They avoid the plains and open country, and confine themſelves to the foreſts. The length of their legs, the ſhortneſs of their neck, and the diſproportionable largeneſs of their upper lip, rendering it extremely difficult, or perhaps impoſſible for them to graze on the ground, they brouze the boughs of trees, or wade into lakes and rivers in ſearch of water plants. The ſtinking bean trefoil is with them a favourite herb; they dig through the ſnow with

* Lib. VIII. c. 15. † Smellie's Buffon, VI. 326: Syſt. Nat. I. 175: Hiſt. of Quad. I. 96: Bell's travels, I. 3. 362, 367: Pontoppidan's Nat. Hiſt. of Norway, Part II. p. 10. ‡ Hennepin: Carver.

with their hoofs to find it. The ancients tell, that to avoid entangling his upper lip between his teeth, the elk is obliged to move backward as he feeds. But modern anatomiſts have diſcovered *, that nature has provided againſt his ſuffering this inconvenience, by the largeneſs and ſtrength of the muſcles deſtined to raiſe the upper lip. The articulations of his legs are ſo cloſely embraced with ligaments, that they cannot be very ſupple or pliant. The olfactory nerves in the brain of the elk are larger than in other animals; and his powers of ſmelling are probably peculiarly exquiſite.

The motion of theſe animals is a high ſhambling trot, amazingly ſwift. To avoid entangling their horns, as they run through the woods, they point their noſes parallel with the horizon †. They raiſe their fore feet commonly three or four feet high in walking.

Mild and inoffenſive in their general manners; yet, in the ſeaſon of autumn, when they feel the influence of the genial paſſion, they are quite furious. The males then ſtrike with both horns and hoofs, the only means of defence or attack with which nature has furniſhed them; ſwim about from iſle to iſle in ſearch of the females; and appear plainly to feel, in all their extravagance, the tranſports of that impetuous paſſion. If a perſon then approach his haunts, he runs upon him at full ſpeed, and either gores him with his horns, or tramples him dead under his feet ‡. The female goes with young through winter; and in the month of *April*, produces commonly two at a birth. The young ones continue to follow their dam for a whole year. The elk is not an unſocial animal. In ſummer, diſtinct families feed toge-

* Smellie's Buffon, VI. 34. † Bell, I. 367. ‡ *Idem*, I. 368.

ther; in winter, numbers meet among the deep pine forefts of the northern regions which they inhabit.

Diſeaſe, though it appears in the greateſt variety of forms among the human ſpecies, and commits upon them the moſt dreadful ravages, yet viſits alſo the inferior tribes of the animal creation. The elk is ſaid to be ſubject to one of the moſt awful of diſeaſes, the epilepſy. The *Poliſh* name *Loſs*, and the *German Eland*, both ſignifying *miſerable*, are ſaid to have been given it, on account of the affliction which it ſuffers from this diſeaſe *. But if we may truſt the tale, the animal is provided with a ſpecific againſt the diſeaſe, and has only to ſcratch its ear with its hoof.

Elks have been ſometimes domeſticated. In old times, Mr. *Pennant* relates, on what authority I know not, they were yoked in *Sweden* in the ſledge: But having, from their dexterity in moving through difficult roads, been frequently acceſſory to the eſcape of murderers and other criminals, the uſe of them was prohibited under great penalties †. Yet a *Swediſh* writer informs us, that till the Baron *Alſtroemer*, the ſame who imported the *Angora* goat, propoſed premiums, and employed other means for its domeſtication, this ſtrong, ſtately, and ſwift footed animal was in that country always wild ‡: From which it ſeems reaſonable to infer, that the elk is at preſent a domeſtic animal in *Sweden*.

But though not generally reduced into a ſtate of ſervitude to mankind, and though not diſpoſed to diſturb their ſecurity, this ſpecies have not eſcaped the notice of thoſe tyrants of the earth. Man, before he ſubmits to cultivate the ground, drinks the blood, and tears the limbs of his fellow-

* Harris's collection of voyages, II. 509. † Hiſt of Quad. I. 96.

‡ Sparrman, in his voyage, I. 253.

fellow-animals; and even in thoſe regions which nature ſeems to have appropriated to the inferior tribes, by rendering the vegetable world there liberal to them, but barren to him, he paſſes the natural boundary, and ravages with all the ferocity of a beaſt of prey. The arts by which the hunters of ancient *Germany* invaded the ſafety of the elk, have been already mentioned. In the north of *Europe*, he is hunted in the ſame manner as the ſtag. As he flees before his purſuers, he often falls ſuddenly down, as if ſtruck dead, though neither ſhot, nor in any manner wounded. Theſe falls are aſcribed to fits of the epilepſy; but are perhaps rather owing to the ſtiffneſs of his joints, the length of his legs, and the difficulties of the tract through which he runs. When cloſely attacked, he turns upon his enemies, and makes a vigorous defence with his horns and hoofs.——The *Indians* of *North America* diſplay great addreſs in hunting the elk. Sometimes, joining in large bodies, they rouſe theſe animals through the woods on each ſide of ſome great river, and ſurrounding them on all* quarters, compel them into the ſtream, where a part of the hunters are ſtationed in a ſeries of canoes, forming a creſcent between the two ſides of the river, to intercept the elks, as they attempt to eſcape by ſwimming, and kill them with clubs or lances. At other times, they, with greater art, incloſe a triangular ſpace with ſtakes, hedged with branches of trees, and opening at the bottom into another triangle, formed in the ſame manner. The opening into the ſecond triangle is hung round with ſnares, made of ſlips of raw hides. Then ranging the woods in conſiderable parties, and rouſing both elks and other deer,

* Bell. I. 368.

they drive them into the incloſures, where they are either caught in the ſnares, or ſhot with the arrows of the hunters. The elk is likewiſe often ſhot with the gun. When firſt rouſed, the animal, by ſquatting on his hinder parts, and making water, affords the hunter an opportunity of ſhooting at him. If the hunter miſs his aim, the elk runs off with a rapid trot, clattering loudly with his hoofs. The happieſt ſeaſon for this purſuit, is in winter, when the ground is covered with deep ſnow, but the ſnow, ſo ſoftened by the impreſſion of the ſun as to yield under the weight of the elk; it ſtill bears the hunter, who travels on broad rackets or ſnow ſhoes; and the object of his purſuit then falls an eaſy prey.

One of the imaginary beings whoſe exiſtence ignorance and wild ſuperſtition have ſuggeſted to the *Indians* of *North America*, is an invulnerable mooſe, of an enormous ſize, capable of wading with eaſe through eight feet depth of ſnow, and with an arm growing on its ſhoulder, ſubſervient to the ſame purpoſes as the human arms. To this monſter they attribute ſovereign authority over his ſpecies, and repreſent him ſurrounded with a court, and reigning over faithful and obedient ſubjects. A mooſe is with theſe ſimple people a beaſt of good omen. To dream of him, is eſteemed a flattering token of long life.

The hoof of the elk is regarded among the *Indians*, the *Norwegians*, and the other Northern nations, to whom he is well known, as a ſovereign cure for the epilepſy. The perſon afflicted, muſt apply it to his heart, hold it in his left hand, and rub his ear with it. It is alſo reduced to a powder, and drunk in water, as a remedy for the colic, pleuriſy, vertigo, and purple fever.

The

The fleſh of this animal is ſweet and nouriſhing. The *Indians* imagine that it invigorates them more than any other ſpecies of animal food. The tongue is peculiarly excellent; the noſe perfect marrow, and eſteemed the greateſt delicacy that *Canada* affords.

The ſkin of the elk is almoſt impenetrable to balls. Dreſſed into buff, it is ſtrong, yet ſoft and light. In preparing it for uſe, the *Indians* uſe a lather of the brains of the animal in hot water. It is the leather of which their ſnow-ſhoes are formed, and with it they cover their canoes.

The hair on the neck, ſhoulders, and hams of a full-grown elk, makes good mattraſſes and ſaddles.

The palmated parts of the horns are hollowed by the *Indians* into capacious ladles.

Species II.—*Rein-deer* *.

In ſize the rein-deer is inferior to the elk. He has ſhorter and thicker limbs, and larger feet. His hair is alſo thicker and warmer. A full grown Rein-deer is between four and five feet high, and of proportionate length. Both ſexes of this ſpecies have large, ſlender, branchy horns, with palmated antlers bending over the brow, and with the upright branches alſo palmated at the top. Theſe horns are commonly from three to four feet long, and between two and three feet from tip to tip. The wild is larger than the tame rein-deer. The female, as well as the male, ſheds her horns; but never during the period

* The *Tarandus* of Pliny: the *Cervus Tarandus* of Linnæus: The *Renne* of Buffon: and the *Rein-deer* of Pennant; called by *Cæſar*, *Bos in Hercinia ſilva, cervi figura.*

period of conception; and what is ſingular, even a caſtrated rein-deer ſheds his horns, though ſeldom before his ninth year. The female has ſix paps; but only four yield milk.

Shaggy hair covers the under part of the neck. The ſpace round the eyes of this animal is invariably black. In the earlier part of life, the body is above, of a duſky yellow; the face and the tail are always white; as the animal advances in age, the dun part of his body becomes firſt hoary, and at laſt white.

This ſpecies were not unknown to the civilized nations of antiquity. *Cæſar* mentions an animal as an inhabitant of the *Hercynian* foreſt, which can be no other but the rein-deer. He obſerved a palmated and branchy antler to project over its forehead; the male and the female were exactly ſimilar in manners, in form, and in the ſize of their horns. *Pliny* * too ſpeaks of it as inhabiting the deſerts of *Scythia*. He deſcribes its ſize and figure with tolerable accuracy; attributing to it branchy horns, cloven hoofs, and ſhaggy hairs. But he adds a fable, which ſhews the imperfect ſtate of *zoology* among the ancients. The rein-deer, he tells, poſſeſſed the power of varying its colour at pleaſure; a power ſtill more aſtoniſhing than that aſcribed to the cameleon! for the rein-deer had to change the colour, not merely of its ſkin, but alſo of its hair. But the alteration of colour, which this animal undergoes in the progreſs of life, muſt have given riſe to the tale.

The rein-deer is at preſent an inhabitant of all the high northern regions of *Europe*, *Aſia* and *America*. *Greenland*, *Spitzbergen*, the northern parts of *Canada*, approaching to *Hudſon's bay*; *Samoidea* †, *Lapland* ‡, *Norway*,

* Lib. VIII. c. 34. † Egede, in Harris's Coll. II. 381. 388.

‡ Harris's Coll. II. 465.

way†, *Kamſchatka*, and *Siberia*, all afford animals of this ſpecies. Among the *Laplanders*, the *Samoides*, and the *Kamſchatkans*, the rein-deer is a domeſtic animal. Leſs than four hundred years ago, he was hunted ſo far ſouth as in the foreſts of *France* *. But the temperature of the climate in that country was not then ſo mild as it has ſince been rendered, by increaſing cultivation, and the cutting down of the foreſts.

Few animals are more mild and amiable in their manners, or more beneficial to man than the rein-deer. His familiarity with mankind has afforded them opportunities of ſtudying his œconomy. The ſeaſon of love is in the latter months of autumn. In *Lapland*, where there are both tame and wild rein-deer, the females are often let looſe into the woods, in the rutting ſeaſon, and copulate with wild males. The progeny of ſuch parents are fitter for the ſledge, but more ferocious and unmanageable than others. The wild rein-deer of the woods are always larger, ſtronger, and blacker than the domeſtic kind. In the rutting ſeaſon, the males, emit a diſagreeable odour. The females are ſometimes barren. The *Laplanders* caſtrate a great part of the young males, leaving only one unmutilated male for every five or ſix females; they perform the operation with their teeth. Caſtration renders the animal more mild and manageable. The period of pregnancy is three-and-thirty weeks; twins are frequently produced. The young follow their mothers two or three years; and attain not their full growth till their fourth year. The age of the tame rein-deer never exceeds ſixteen years. His favourite food is a peculiar ſpecies of moſs ‡, which is the chief vegetable production of the dreary plains that he

† Pontoppidan's Nat. Hiſt. of Norway.

* Smellie's Buffon, VI. 320. ‡ Rein-liverwort.

he inhabits in winter, and for which he digs, with his hoofs, through the ſnow. In ſummer, he eats the leaves and buds of trees, in preference to graſs. His horns render it difficult for him to graze on the ground.

Tame rein-deer are kept in herds. It is difficult to keep a herd together. They are naturally diſpoſed to eſcape from the hands of man; and the gnats, which are peculiarly troubleſome to them, greatly increaſe their natural reſtleſsneſs. Sometimes the *Laplanders*, who have been moſt ſucceſsful in domeſticating this animal, take ſhelter themſelves, with their rein-deer, around their cottages, and kindle fires of moſs, that diffuſe a thick ſmoke, which keeps off thoſe inſects. The rein-deer themſelves, to avoid the perſecution of the gnat, and of a gadfly whom they find a no leſs formidable enemy, ſcale the ſummits of the loftieſt mountains; where they ſtarve, rather than expoſe themſelves to their tormentor, if not compelled by the herdſmen to deſcend in queſt of food. The gadfly depoſites its eggs on the rein-deer; and theſe ſettling into the ſkin of the poor creature, produce worms which riddle it like a ſieve. This happens in winter and ſpring, when the rein-deer are unavoidably confined to the marſhy plains; the holes made by the worms, cloſe in ſummer; and it is only in autumn, that the fur becomes of value.

Beſides what they ſuffer from theſe enemies, rein-deer are liable to other cauſes of uneaſineſs. The teats ſometimes crack, and yield blood inſtead of milk; a giddineſs ſometimes ſeizes them, in which they turn round till they drop down dead; ulcers about the hoofs ſometimes incapacitate them for walking; and they are, at times, deſtroyed by an awful diſeaſe called by the natives of *Lapland*, *Suddataka*, by which they become wild and

and furious, ceaſe to receive nouriſhment from their food, though ſtill eager to eat; and at laſt die through leanneſs and decay of ſtrength. In a wild ſtate, the rein-deer is hunted by man; bears make occaſional depredations on both tame and wild herds; and the glutton or carcajou often drops from the thick branches of ſome tree on the unwary rein, faſtens with its teeth and claws on the upper part of his neck, and ſticks immoveably, till its prey, exhauſted with his exertions to eſcape or ſhake it off, drops down dead of fatigue and loſs of blood. The deer has no other means of ſaving himſelf from the arts of this enemy, but plunging into water; on which the care of its own ſafety makes the glutton leave him. The wolf is another of the rapacious animals that prey on the rein-deer. Wolves diſtinguiſh a rein-deer from a diſtance, by the ſmell, or by the clattering noiſe of his hoofs when he runs. Againſt a ſingle wolf, a rein-deer is able to defend himſelf; but when thoſe ravenous creatures come on in numbers, they are eaſily ſucceſsful.

Nature ſeems to have deſigned the rein-deer as an ample recompence to the *Laplander* for her unkindneſs to him in other reſpects. His chief, almoſt his ſole occupation is to manage his rein-deers. The rein is his horſe, his cow, his ſheep, his goat. The female is carefully milked; and her milk proves a wholeſome beverage. It yields rich cheeſe, and not bad butter. In travelling, the *Laplander* mounts on the back of his rein, or is drawn by the docile animal in his ſledge. The rein, as ſoon as yoked in the ſledge, runs off with amazing velocity, and conducts the traveller ſafely through the moſt dangerous and difficult ways *. Sometimes, however,

* Harris's Coll. II. 463.

when urged beyond his ſtrength, he turns with fury on his driver, who has no means to ſave himſelf but overturning the ſledge, and hiding under it. Yet he refuſes not to run from thirty to ſixty Engliſh miles without reſt. As the *Tartars* and *Arabs* live in great familiarity with their horſes, talk to them at times, and treat them as companions, ſo the *Laplander* pretends to a ſimilar intimacy with his rein. He whiſpers in his ear what road to take, and with what degree of ſpeed to run*; and as they hold on their way through the deſerts, addreſſes to him his ſongs of love, his effuſions of joy or ſorrow.

After the rein-deers have nouriſhed their *Lapland* maſters with their milk, and conducted them as ſubmiſſive ſlaves, yet faithful companions, on their journies, they are at laſt ſlain for other purpoſes. In winter, when fed only on moſs, they become very fat. Their fleſh is either eaten freſh and newly killed, or ſalted and dried, or dried and preſerved without ſalt. It is the *Laplander*'s principal article of food. The ſkin, with the fur, is made into garments for both ſexes. Of it is alſo made the harneſs by which the deer are yoked in the ſledges. As an article of traffic, the *Laplanders* likewiſe diſpoſe of the furs in conſiderable quantities to their neighbours. Sails for their ſkiffs are formed of the hides by the ſimple *Samoiedes*. The ſinews, dried and divided, afford excellent ſewing thread. The bones, the horns, and the hoofs have alſo their uſes.

The *Laplanders* appear by much the moſt ingenious people of all the tribes of mankind who inhabit the ſame regions with the rein-deer. *Samoiedes*, *Kamtſchatkans*, *Eſquimaux*,

* Harris's Coll. II. 463.

Eſquimaux, and *Greenlanders*,—none of all theſe ſavages have ſo ſkillfully availed themſelves of the uſeful qualities of this ſpecies as the native of *Lapland*. The *Samoiede* employs the living rein for no other purpoſes but the draught. The rude *Koreki* of *Kamtſchatka* keep ſometimes not fewer than twenty thouſand in a herd, yet kill them only for the ſake of the ſkins. The *Greenlanders* and *Eſquimaux* are unacquainted with the rein in any other but a wild ſtate; they purſue him in the chace, eat his fleſh raw, and often drink his blood warm from the carcaſe; they gorge up the fat with peculiar reliſh. The *Greenlanders* furround the wild rein-deer in crowds, alarm and confound them by various arts, and driving them into narrow defiles, there kill them with harpoon darts. The fleſh, the fat, and the ſkins, are all important articles to the *Indian*; he eats the fleſh, and ſells the ſkins, and ſometimes the fat, to the *Engliſh*; yet he has never thought of domeſticating them, and kills them only in the chace.

Rein-deers have been generally conſidered as incapable of ſubſiſting even in temperate climates, and as thriving on no food, but the rein-liverwort, their favourite moſs. Cultivation has exterminated or baniſhed them from the foreſts of *France* and *Germany*. Such as have been in late times introduced into *Holſtein*, *Pruſſia*, and the neighbourhood of *Dantzick*, whether kept in confinement, or let looſe into the woods, have periſhed, without reproducing their ſpecies. Within theſe few years, Sir *H. G. Liddel*, in his return from a tour to *Lapland*, brought with him to *England*, five rein-deer; which he having placed in the parks round *Eſlington* caſtle, in the north part of *Northumberland*, containing ſeveral large fir plantations, and extenſive moors plentifully covered

with rein-liverwort; they at firſt throve well, and produced young; but, by various accidents, both parents and young are now either all dead, or if any ſurvive, theſe are in a very declining ſtate *.

III.—*Stag* †, *Hind, Calf.*

THE ſtag is an animal of a ſtately elegant form. When full grown, he is commonly between four and five feet high. Often, when he enjoys abundance of food, and lives undiſturbed by mankind or the beaſts of prey, he attains a much larger ſize. His legs are ſlender and elegant; his tail ſhort; his ears large and pointed; his horns lofty and branchy. The hind is of a ſmaller and more ſlender form, and deſtitute of horns. A reddiſh brown colour, which has gained this ſpecies the appellation of red-deer, diſtinguiſhes the upper part of the body; the hinder part of the neck, and the ſpace between the ſhoulders, are marked with a black liſt; ſome part of the face is commonly black; the belly and the lower ſide of the tail are white. Sometimes we ſee yellow ſtags; and ſometimes, but very ſeldom, a white one.

The ſtag loſes and renews his horns annually; and for a while each new ſet of horns is adorned with an additional branch. The *calf* has no horns, but only ſhort, rough, horny excreſcences, covered with a thin, hairy ſkin. In his ſecond year, his horns are ſingle and ſtraight, and at leaſt till his ſixth, the number of the antlers continues

* Conſett's tour through Sweden, Swediſh Lapland, &c.

† *Cervus Elaphus* of Linnæus: *Cervus* of Pliny: *Red Deer, Stag*, or *Hart* of Ray: *Cerf* of Buffon: and *Stag*, or *Red Deer* of Pennant.

Pl. X. 1. STAG 2. ROEBUCK 3 PORCINE DEER



continues to increaſe. From this period, they are multiplied ſo irregularly, that the animal's age comes to be eſtimated, not ſo much by the number of the antlers, as by the ſize and thickneſs of the whole horns. Old ſtags caſt their horns in the end of *February*, or the beginning of *March*; the youngeſt are the lateſt in ſuffering this change; but by the end of *May*, they have all, of whatever age, laid aſide their old, and begin to ſhoot forth new horns. The horns either fall off ſpontaneouſly, or are rubbed off by gentle friction againſt trees. The ancients fancied, that ſtags were at great pains to hide their horns in places where they might not be found; the right horn eſpecially, was, in their opinion, known to the animal to be highly valuable for its medicinal virtues, and was therefore ſo induſtriouſly concealed, that it never fell into the hands of his great enemy and perſecutor, man *. The ſhedding of the horns is advanced by a mild, and retarded by an inclement winter. After depoſiting their horns, ſtags forſake their uſual haunts, walk with their heads low, avoid thick and deep foreſts, and retreat among bruſhwood, till the branchy ornaments of their heads are renewed. The ſprouting horns are at firſt extremely tender, and covered over with blood-veſſels. They grow not like the horns of the bull, the ſheep, or the goat, by ſhooting out new matter at the roots, and moving forward that which is already formed; but like trees and other vegetative bodies, increaſe their length by additions at the points. Stags have not their horns uniformly coloured; thoſe of the younger ſtags are whitiſh; old ſtags have ſometimes red, ſometimes black, and ſometimes pale dirty coloured horn. When their horns

* Ariſtot. Hiſt. Anim. Lib. IX. c. 6; Plin. Nat. Hiſt. VIII. 32.

horns are completed for the ſeaſon, they poliſh them by rubbing againſt trees; and it has been imagined, that the horns were coloured by the bark and ſap of the trees againſt which they were rubbed. But experiments made of purpoſe, have proved this opinion to be fanciful *. The ancients tell us, that ivy had been obſerved ſpreading upon the horns of ſtags †. *Buffon* ſeems to think them a ſort of vegetable ‡. They ſcarce ever acquire more than twenty or two-and-twenty antlers. In the old age of the animal, they become dry and ſtunted. A ſtag caſtrated with his horns on his head, never loſes them; if caſtrated when they are newly fallen, they are never renewed.

Delicacy and acuteneſs of the ſenſes diſtinguiſh the ſtag in an eminent degree. His powers of ſmelling are exquiſite. His eye is ſparkling, ſoft, and glowing with expreſſion. He hears diſtant and low ſounds, and is not incapable of reliſhing the melody of muſic. He is faſcinated with the ſound of the ſhepherd's pipe. One mode of hunting this animal, practiſed in ancient *Greece*, was for two perſons to go out together, and one to charm the unſuſpecting ſtag with the melody of his voice or his pipe, till the other approached near enough to pierce him with a dart or arrow §. When he liſtens eagerly, he erects his ears. The foreſt is his favourite haunt; the leaves and ſprouts of trees, the food of which he is fondeſt. In the ſeaſons, when he is not exhauſted by the efforts of love, or faint through want of food, or timid and diſpirited on account of the tenderneſs of his budding horns, he runs with amazing vigour and velocity.

* Smellie's Buffon, IV. 84.
† Ariſtot. IX. 6: Plin. VIII. 32.
‡ Smellie's Buffon, IV. 93.
§ Ariſtot. IX. 6.

city. He is mild and gentle, and views mankind, when unaccompanied by dogs, without fear, and even with a degree of confidence. Reduced to extremity by the attacks of an enemy, reſentment and courage are raiſed in his breaſt, and he ſells his life dear. He then kicks with his fore feet, and puſhes with his horns. A tiger has been known to flee before a ſtag *; dogs often ſuffer from his fierce deſpair. His voice is bold and ſtrong; and as he advances in age, becomes bolder, ſtronger, and more tremulous. The cry of the hind is not ſo loud as that of the ſtag, and is never excited but by apprehenſion for herſelf, or her young. He eats ſlowly; and ſuminates with difficulty, as the length of his neck renders him unable to bring up his food for chewing, without a diſagreeable belching. In winter and ſpring, the ſtag ſcarce ever drinks; during theſe ſeaſons, he unavoidably receives enough of moiſture with his food. But, in the heats of ſummer, he plunges into the ſtream, and ſwims broad rivers, wide lakes, and even arms of the ſea. *Pliny* † tells us, that ſtags uſed in his days to paſs commonly enough from *Ilicia* to *Cyprus*. Numbers were obſerved to ſwim together in one line; each reclining his horns on his companion immediately before him ‡. In their ordinary aſſociations, ſome one of the old males ſeems to be, in ſome meaſure, inveſted with the ſovereignty of the herd.

The ſtag feels the paſſion which prompts to the propagation of the ſpecies, in all its extravagance and fury. The rutting period is with him a ſeaſon of madneſs. It is

* Goldſmith's Hiſt. of Anim. Nat. III. 106. † Lib. VIII. c. 32.

‡ Pontoppidan informs us, that the ſame thing has been obſerved of the ſtags in *Norway*. Nat. Hiſt. of *Norway*, Eng. Tranſ. P. II. p. 9.

is about the end of *Auguſt*, or in the beginning of *September*, when the ſtag, after his new horns are fully grown, wanders from the thickets in which he had hid himſelf, while they were ſprouting, in ſearch of the kind. His neck is then ſwollen; his eyes are wild and glaring; he forgets his uſual caution, and wanders through the open fields, regardleſs of man or other animals; he ſtrikes his horns with mad impetuoſity againſt trees and other obſtacles; he roars with a loud, rough, and tremulous voice. When two or more rival ſtags court the favours of the ſame hind, dreadful combats enſue. They redouble their roarings, paw the earth with their feet, and meeting, ſtrike their heads againſt each other with impetuous fury. One is at length diſabled or forced to flee. But the victor has often repeatedly to renew the conflict with a freſh opponent, before he be left to the undiſturbed enjoyment of his miſtreſs. Sometimes, while the older ſtags are contending for the hind, a young one haſtily enjoys the prize for which they contend, and runs off. Even, after conquering his rivals, and obtaining ſecure poſſeſſion of his miſtreſs, a ſtag ſoon diſdains thoſe favours which are enjoyed without conteſt, and without courtſhip. After a few days, he wanders in ſearch of another, facing new dangers, and combating other rivals. While under the impulſe of this powerful appetite, he ſcarce eats, ſleeps, or reſts, but continues to combat, and to enjoy. At length, his appetite is ſatiated, and his vigour exhauſted; from ſtrong, bold, plump, and gloſſy, he becomes feeble, lean, and timid. Conſcious of his imbecility, he retires from the herd, to recover his fleſh and recruit his ſtrength in ſolitude. Through winter, he continues to live apart from the hinds; and it is not till

Spring.

Spring, that his fatneſs and vigour begin to be renewed after the enfeebling effects of the rut. In winter, only the hinds and the young ſtags, not above a year old, are to be found together. A ſtag becomes capable of procreation at the age of eighteen months.

The hind goes between eight and nine months wih young, and brings forth, in *May*, or in the beginning of *June*, ſcarce ever above one, but never more than two at a birth. When the period of parturition comes on, ſhe retires from the young ſtags, in whoſe ſociety ſhe ſpent the winter. She feels the tendereſt affection for her calf, and diſplays great ſagacity in protecting and bringing it up. She carefully hides it in ſome dark thicket, from thoſe numerous enemies of whom its life is in danger; for the eagle, the falcon, the oſprey, the wolf, the dog, and the rapacious family of the cat kind, watch all eagerly to diſcover her retreat, and rob her of her charge. Even the ſtag himſelf is its enemy. But between courage and ingenuity, ſhe ſhews herſelf a powerful protectreſs. In defence of her young, ſhe ſometimes boldly oppoſes force to force; at other times, ſhe, with the ſame unconcern for her own ſafety, offers herſelf to the chace to miſlead the hunter or the beaſt of prey from the covert where ſhe has hid her calf. Through ſummer, the calf continues to follow its dam. In the rutting ſeaſon, the old ſtags drive it to a diſtance. In winter, while the old ſtags wander in ſolitude, it aſſociates with the hinds and with other young ſtags of its own age.

Thirty or forty years are the ordinary term of this animal's life. But among the ancients, it was commonly believed to live, when it did not fall by a violent death, to a much more advanced age; and ſome wonderous inſtances of its longevity have been commemorated. *Pli-*

ny tells, that more than a hundred years after the death of *Alexander* the great, ſome ſtags were taken, with golden chains about their necks, which appeared to have been put upon them by the command of that hero *. Another tale is mentioned of a ſtag taken in the foreſt of *Senlis*, with a collar on his neck, bearing this inſcription, *Cæſar hoc me donavit*; an inſcription from which it was at firſt inferred that the ſtag had been once in the hands of *Julius Cæſar*, or ſome other *Roman* emperor. But, as the *German* emperors alſo take the name of Cæſar, the ſtag has been ſince ſuppoſed to owe his collar only to ſome cotemporary emperor of *Germany* †.

The ſize and ſtature of the ſtag are influenced by the circumſtances of his life, and the nature of the place which he inhabits. A ſtag who feeds in rich vales, or on hills abounding with corn, is larger and taller than thoſe that inhabit dry rocky mountains. The red-deer of the mountains are low, thick, ſhort, and ſlow, but perſevering in flight. A ſtag, who paſſes his life undiſturbed by men or dogs, grows larger and ſtouter, and ſhoots out more branchy and more magnificent horns, than one who lives in conſtant alarm, and is often haraſſed and almoſt run down in the chace.

The ſpecies of ſtags are diffuſed over all *Europe*, and through the northern parts of *America* and *Aſia*. Yet, though rather a northern animal, the ſtag never appears in the extreme North latidudes. He is unknown at *Hudſon*'s *Bay*, in *Kamtſchatka*, and in almoſt all the regions inhabited by the rein-deer. He is, at the ſame time, not impatient of the heat of ſome ſouthern climates:

* Nat. Hiſt. VIII. 32.

† Smellie's Buffon, IV. 101.

mates: *Barbary* affords red-deer; and in *Mexico* the ſpecies is well known, and an old inhabitant. They are numerous, and grow to a vaſt ſize in the ſouthern part of *Siberia*: they have been exterminated from *Ruſſia*. They abound in *anada*, and are ſeen grazing among the Biſons on the rich plains lying along the *Miſſiſipi*, the *Miſſouri*, and other *American* rivers *.

The mild and peaceful character of the hind and ſtag affords them no protection from the hoſtilities of rapacious enemies. Wolves and other beaſts of prey deſtroy vaſt numbers of this ſpecies, and have even exterminated the race from ſome countries where they were once numerous †. Man, who wars with the beaſts of prey in his own defence, tyrannizes over the domeſtic animals becauſe he finds their ſervices uſeful, and purſues the gentler wild animals, becauſe they are overcome without danger, and without reſiſtance, has in all ages taken peculiar pleaſure in chacing the ſtag. So aſſiduouſly has this diverſion been cultivated among civilized nations, as to be almoſt reduced to an art, and accommodated with a ſet of technical phraſes ‡.

The hunting of the ſtag was a favourite diverſion with the *Greeks* and *Romans*. *Diana* let looſe her dogs and emp-

* Boſſu's travels through Louſiana, Eng. Tranſ. I. 93.

† Pontoppidan's Norway, Part II. p. 9.

‡ The *Engliſh* huntſmen calls the young animal of this ſpecies, in the firſt ſix months of its life, a *calf* or *hind calf*; it then becomes a *knobber*; then a *pricket*, *brock*, or *ſtaggard*; next a *ſtag*; and after that an *hart*: the female, from an *hind-calf*, becomes firſt a *hearſe*, and then a *hind*. The ſtag is ſaid to harbour in the place he reſides; when he cries, he is ſaid to *bell*; the print of his hoof is the *ſlot*; his tail the *ſingle*; his excrement the *fewmet*; his horns are called his head; and are, in the firſt year, *broches*; in the third year, *ſpears*; in the fourth year, the part bearing the antlers, is called the *beam*; he has alſo *antlers*, *ſur-antlers*, and royal *antlers*.

tied her quiver upon ſtags; when ſurpriſed naked with her nymphs, by *Actæon*, ſhe transformed the unhappy culprit into a ſtag, and drove him to be devoured by his own dogs *. The *Romans* were accuſtomed ſometimes to ſhoot theſe animals with arrows †; ſometimes, to hunt them down with dogs; or, at leaſt, to uſe againſt them dogs, who, by their barking, might fright them into the toils ‡; and ſometimes to ſcare and perplex the timid deer by diſplaying before them bunches of red feathers §. They were not abſolutely ſtrangers to ſtags in a domeſtic ſtate; *Pliny* relates, that *Sertorius* had a tame white hind, and perſuaded the nations of *Luſitania*, whom he united againſt the power of *Rome*, that ſhe was endowed with ſupernatural knowledge, and gave him intimation of future events ‖.

The nobles of *Sicily* have, in a later period, employed bunches of red feathers in attacking the ſtag. Warned of the particular place where a herd of theſe animals was paſſing, they uſed to aſſemble in a body, each with a bow, a bundle of ſtaves ſhod with iron and bored through the head, a cord paſſing through the ſtaves, and a bunch of red feathers. Then ſurrounding the herd of deer, they formed a ſort of hedge or paliſade, to confine the animals, with their ſtaves ſet up in the ground, the cords joining them into one circle, and the bunches of crimſon feathers dangling from the cords, among the ſtaves.

* Ovid, Metamorph. Lib. III. Fab. 4.

† Figere cervos. Virg. Ec. 2. 29.

‡ Canibus,———
———Monteſque per altos,
Ingentem clamore premes ad retia cervum. Id. Georg. III. 410.

§ Hos non immiſſis canibus, non caſſibus ullis,
Puniceæve agitant pavidos formidine pennae. Id. Georg. III. 371.

‖ Plin. Hiſt. Nat. Lib. VIII. c. 32.

ſtaves. Thus ſurrounded and incloſed, the deer were as effectually hindered from eſcaping, as if confined within a wall of the greateſt ſtrength and height; they durſt not face the crimſon feathers, and when attacked, could only run about in confuſion, within the circle. The huntſman rode in among them, and called on the perſons in the party individually, to ſhoot ſuch as he pointed out, till the whole herd was deſtroyed *.

In *France* and *England*, countries in which the chace has long been a favourite amuſement of the great, the hunting of the ſtag is purſued in a much nobler manner; if the animal falls, he falls not by ſtratagem, but by open, generous arts. The huntſman, with his dogs, ſeeks out his haunt, and rouſes him before them. When the ſtag is unharboured, the huntſman traces his ſteps, to diſtinguiſh by the print of his foot, or by his dung, whether he be worthy of purſuit. He then lets looſe his whole pack of hounds, winds his horns, and encourages them alſo by his voice, to follow with ſteadineſs and eager ſpeed. The ſtag flees before them with the ſwiftneſs of the wind, leaving both dogs and men miles behind him. The hounds open in full cry, and trace his footſteps with amazing ſagacity and delicacy of ſcent. At length, the fleeing animal ſo far outſtrips his purſuers, that their noiſe and cries no longer reach his ear. He ſtops, gazes around, and fancies himſelf ſafe. But the noiſe approaches; he is again alarmed, and renews his flight. He now begins to practiſe ſtratagem and art, returns upon his former footſteps, attempts to mingle again with the herd from which he was ſingled out, or ſpringing aſide, ſquats upon his belly, in hopes that his purſuers may paſs without noticing him. When theſe arts fail, and he feels his ſtrength exhauſted; his pace now becomes

* Pier. Hieroglyph, Lib. VII. c. 6. quoted by Goldſmith.

comes ſtiff and ſhort, and his mouth black and dry; his tongue hanging out, and as it were tears ſtarting from his eyes; he betakes himſelf, as his laſt hope, to the neareſt river or lake, and ſwimming againſt the ſtream, with the moſt anxious care to avoid touching the boughs of any adjoining trees, or the herbage on the banks, tries thus to elude the quick ſcent of the hounds. When every art has been tried in vain, and all his reſources are at length exhauſted, he deſperately turns upon his enemies, and ſtanding at bay, with the moſt furious exertions of his remaining ſtrength, aims at both men and dogs, and often dies not unrevenged. But numbers ſurround and overpower him, the huntſman winds a loud blaſt with his horn, and the dogs, with redoubled fury, tear the ſtately animal to the ground.

This ſpecies were once numerous through *Britain*. The *Saxon* monarchs of *England* formed ſome uncultivated tracts into foreſts for deer. The princes of the *Norman* line, animated with the moſt extravagant paſſion for the chace, and careleſs of the welfare of their ſubjects, depopulated their kingdom, razing villages, and levelling churches and other religious houſes, to form foreſts for the maintenance of theſe and other wild beaſts. But, in the progreſs of liberty and civilization, the number and extent of thoſe foreſts were greatly reduced. Our monarchs learned to conſult the happineſs of their ſubjects, and the population of their dominions, in preference to their own diverſions. And though there are ſtill ſeveral royal foreſts in *England*, theſe are not many, nor are they guarded by the ſame ſanguinary laws as formerly.

Beſides being a tyrannical encroachment on the liberties of the ſubject, and a ſavage depopulation of the kingdom,

dom, the exiſtence of ſo many foreſts, and the foreſt-laws, were calculated to produce the moſt unfavourable effects on the morals of the lower claſſes of the people. Deer ſtealing was a crime of which, when they could eſcape detection, the youth made very light. But the parties who engaged in ſuch an enterpriſe, were generally loſt to ſobriety and induſtry, and had their morals completely corrupted. We indeed owe the dramatic productions of our admired *Shakeſpeare* to the proſecution for deer ſtealing, which drove him from his original occupation. But the ſame circumſtances which excited a *Shakeſpeare* to the exertion of powers of genius, that might otherwiſe have lain dormant, would undoubtedly conduct many others to extremities of guilt and miſery.

The deer ſtealers practiſed ſome ſingular arts, and had often dangerous and ſurpriſing adventures in purſuing their forbidden ſports. They would ſometimes watch the pregnant hind to her lair, and when the calf was dropped, pare its feet to the quick, to prevent its eſcape till it became large and fat enough to be killed. Sometimes, a brother deer ſtealer was by moon ſhine miſtaken for a deer, and ſhot at with a bullet. Some of thoſe fellows once advancing, with a dog, to a place in *Wolmer* foreſt, where they ſuſpected a calf to have been depoſited, the parent hind ruſhed out from the brake, and making a vaſt ſpring, with all her feet cloſe together, pitched upon the neck of the dog, who fell dead to the ground *.

In the *Highlands* of *Scotland*, there are ſtill large herds of red-deer. Before the hereditary juriſdiction of the *Highland* chieftains was aboliſhed, and means employed to weaken the attachment by which their vaſſals were ſo abſolutely devoted to their will, thouſands uſed to be occaſionally

* White's Natural Hiſtory of Selborne.

occaſionally aſſembled to hunt the deer over the wild hills of the north; the head of a clan went out to purſue his ſports with a parade of attendants, as if he had been a mighty monarch. So late as in the beginning of the preſent century, there were red deer ſcattered over the hills of *Gallowây*. But by the eagerneſs with which the peaſants purſued them, they have been long ſince exterminated from that diſtrict.

Theſe animals afford various articles of utility to human life. The firm and ſolid texture of the horns fits them for handles to knives and other domeſtic utenſils. The ſkin is dreſſed into excellent leather. The fleſh, though when taken in the rutting ſeaſon, of an agreeable taſte and ſmell, affords at other times, wholeſome and pleaſant food. The tallow is made into very good candles. Spirit of hartſhorn is a well-known ſtimulant.

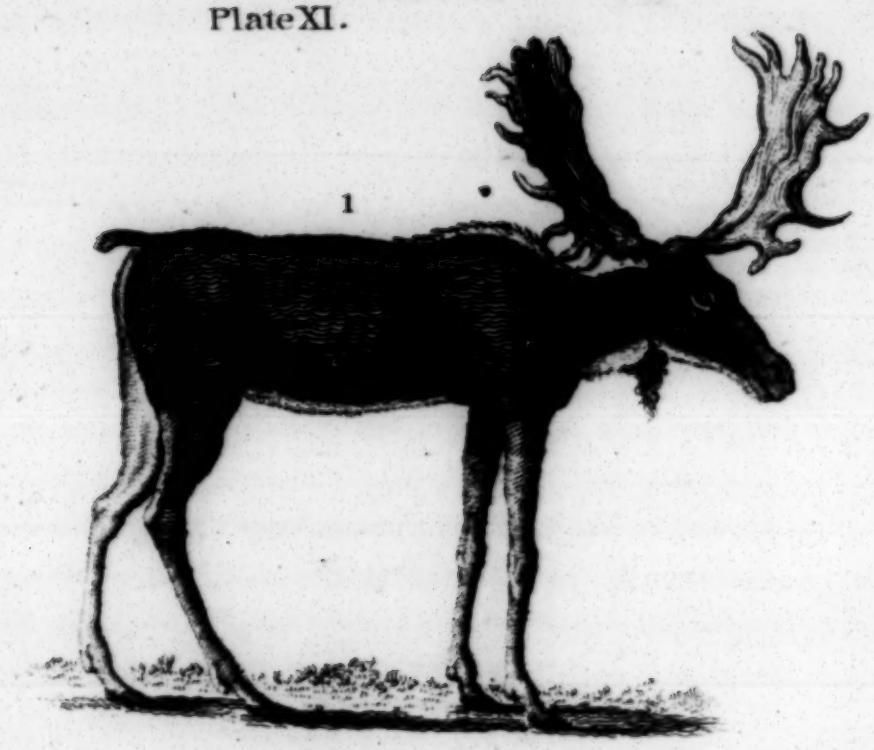
Species IV.—*Fallow-Deer* *.

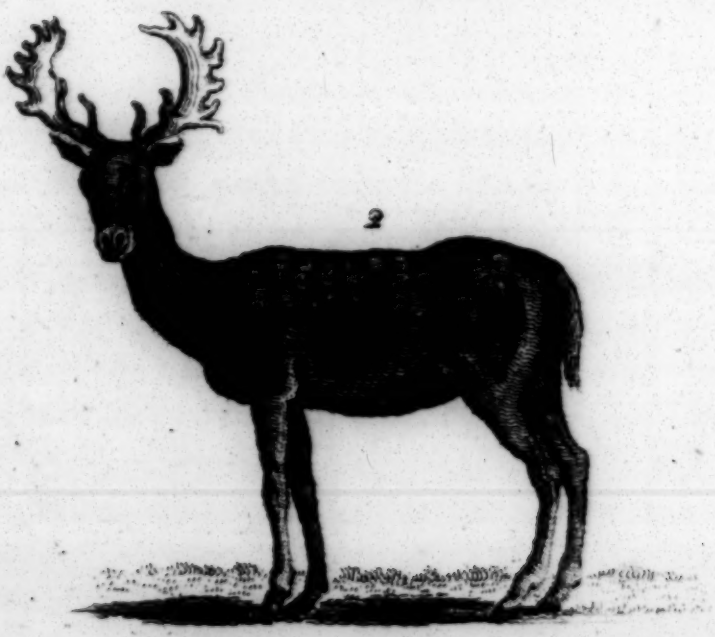
In form, in manners, in ſwiftneſs, in timidity, and in bearing large branchy horns, the fallow-deer ſtrikingly reſembles the ſtag; but is conſiderably ſmaller, and has not round but palmated horns. The colours of this ſpecies, too, are more various than thoſe of the ſtag; they are reddiſh, dark-brown, ſpotted, and often white. The fallow-deer has a longer tail than the ſtag.

The fallow-deer, like the ſtag, annually depoſites and renews his horns. The doe is never furniſhed with this ornament. The fawn does not immediately ſhoot out horns.

* *Platyceros* of Pliny; *Cervus Dama* of Linnæus; *Le Daim* of Buffon; *Fallow Deer*, *Buck*, *Doe* and *Fawn* of Pennant and other Engliſh writers.

Plate XI.





1. ELK 2. FALLOW DEER

horns. The horns are every year improved in ſize and magnificence, till the buck attains his full growth.

In the organs of ſenſation, fallow-deer appear not more imperfect than ſtags. They are a gentler and more delicate ſpecies. The elk, the rein, and the ſtag, ſeem deſtined to inhabit colder climates, and to live in a ſtate of more entire independence than the fallow-deer. Although inhabiting the ſame foreſts, this ſpecies never aſſociate with the ſtag. Their character approaches ſomewhat to that of a domeſtic race. They need the attention and care of mankind. They are generally inhabitants of parks prepared and appropriated for their uſe. They feed in herds. A large body feeding in one park, divides into ſeparate herds; and among theſe conteſts frequently ariſe, in which the arts of attack are practiſed with aſtoniſhing order, intrepidity and obſtinacy. The buck feels not the violent emotions of love ſo early in the ſeaſon as the ſtag, nor is he ſo much infuriated by their impulſe. He leaves not his uſual haunts, in ſearch of a miſtreſs. Yet, in purſuing the gratifications of love, he is often involved in rivalſhip and fierce combats. The female goes between eight and nine months with young; and nurſes and watches over her fawns with all the tender ſolicitude becoming a mother. Rutting does not enfeeble and emaciate the buck in ſo extreme a degree as the ſtag. But he is equally inconſtant, rambling from doe to doe, till he ceaſes to feel the ſtings of this keen appetite. The life of fallow deer ſeldom exceeds twenty years; and they continue capable of procreation till the age of fifteen or ſixteen. They feed on vegetable ſubſtances more indiſcriminately than the laſt ſpecies. Both ſtags and fallow-deer, when thirſty, hold their noſes for a conſiderable time under water, in drinking; and the

minute holes with which they, as well as antelopes, are provided under the eyes, ſeem intended by nature as *ſpiracula*, through which they may breathe when their noſtrils are filled up. Fallow-deer are, equally with ſtags, objects of the chace; they run with leſs vigour and perſeverance; but diſplay greater cunning and dexterity in their doublings and ſhifts to eſcape. Hounds reliſh their fleſh ſo much more than that of red-deer, that they inſtantly give up the purſuit of a ſtag or hind, if they happen on the tract of a doe or buck.

Fallow-deer inhabit through almoſt all *Europe*. In *France* and *Germany*, they are not numerous. Wild fallow-deer are found in the foreſts of *Lithuania* and *Moldavia*, in *Greece*, and the north of *China*. They were not originally natives of *America*. In *Spain*, they grow remarkably large. They are more numerous in *Britain* than in any other part of *Europe*. In *Ruſſia*, they are entirely unknown; in *Sweden*, preſerved in parks. One of the breeds which have been propagated in *Britain*, was originally introduced from *Norway* by King *James* I. when he went to bring home his *Daniſh* bride *.

The fleſh of the fallow-deer is perhaps the moſt agreeable ſpecies of animal food. Both men and dogs prefer it greatly to that of the ſtag. The ſkin of the buck and the doe is dreſſed into the beſt leather for breeches, gloves, &c. The horns of this, as well as thoſe of the ſpecies laſt deſcribed, being compact, ſolid, and weighty, are wrought into excellent handles for knives and other utenſils. Spirit of *hartſhorn* is extracted from them; and after loſing that ſpirit, they are reduced by calcination, to what is called burnt *hartſhorn*, which conſtitutes a valuable material in fluxes for promoting the fuſion of metals.

* Britiſh Zoology, I. 47.

SPECIES V.—*Roe* *.

THE roe is inferior in ſize to the other ſpecies which have been deſcribed as belonging to this genus. A full grown roe is ſcarce four feet in length, between the noſe and the origin of the tail, and not above two feet and an half high. Its form is ſprightly and elegant. Its hair is in ſummer ſhort and ſmooth; but grows, againſt winter, to a great length. The ſummer colour is a deep red at the point of the hair, and a dark grey beneath. In winter, the general colour is hoary, but on the back often very dark. The tail is only an inch in length. Each of the hinder legs is furniſhed with a tuft of long hair, immediately under the firſt joint. The rump, and the under ſide of the tail are white. The face is black. The horns of the roe are commonly from eight to ten inches long, upright, round, and divided only into three branches. They increaſe till the fourth year, and then appear complete. Its rounded horns, the paucity of its antlers, its diminutive ſize, and its annually loſing and renewing the ornaments of its head, ſufficiently diſtinguiſh the roe from all other animals of the deer or ſtag kind.

The favourite haunts of the roe are hilly and wooded tracts of country; yet he ſeldom climbs the lofty mountain, or plunges into the deep foreſt. He is a monogamous animal. Roes aſſociate in families, but not in herds. A male and a female commonly form an attachment in infancy, by which they continue united through life, producing and ſending out annually ſucceſſive families of

* *Caprea* of Pliny; *Capreolus* of Linnæus; *Roe* of Pennant.

their progeny. The ſexual appetite does not rouſe the roe to ſuch wild extravagance as the ſtag or the fallow-deer. He feels the impulſe of love in the beginning of *November*, ſoon after depoſiting his horns. The female, after going with young between five and ſix months, produces in *April*, commonly twins, ſometimes three, and ſometimes only a ſingle fawn. She nurſes and watches over her progeny with tenderneſs. The buck is for a while hoſtile to them: and they are at the ſame time in danger from man, and from the birds and beaſts of prey. In protecting them, ſhe practiſes the ſame arts as the female of the ſpecies laſt deſcribed; hides them in a thicket; offers herſelf to miſlead an enemy; and even exerts herſelf with deſperate courage in their defence. Yet numbers of this ſpecies fall in their infancy; ſo numerous, ſo powerful, and ſo vigilant are their enemies! They have been by degrees extirpated from ſeveral countries where they were once plentiful; and their numbers are continuing to decline.—In a ſhort time, the buck ceaſes to regard the fawn with an unfriendly eye; and the whole family then feed together. The fawns, after continuing eight or nine months under the protection of their parents, leave them, and form new families.

In ſummer, wild roes feed on graſs, and eat with peculiar fondneſs, a plant called in the *Highlands* of *Scotland*, the *roe-buck-berry* *. In winter, they brouze on brambles, broom, heath, the tender branches of fir and birch, and the catkins of the hazel and the willow. They ſelect their favourite plants with faſtidious delicacy. Roes thrive not when much diſturbed by the attentions of mankind. The tracts of countries the moſt favourable to them,

* *Rubus Saxatilis.*

them, are thoſe which conſiſt of hills, woods, and cultivated lands interſperſed.

The roe does not abſolutely refuſe familiar intercourſe with mankind. Yet, no arts have ſucceeded ſo far as to render any individuals of this ſpecies entirely tame. They are ſubject to ſudden ſtarts of caprice, and apt to take up prejudices againſt certa n perſons, which render them diſagreeable and dangerous companions. Impatience of confinement prompts them, at times, to leap with ſuch violence againſt park walls, even when they cannot poſſibly eſcape, that they are daſhed down in a miſerably maimed and lacerated condition.

The fleſh of the fawn, when very young, is looſe and ſoft. Killed at the age of eighteen months, it is in its higheſt perfection, and truly exquiſite food. When the animal has been fed in plains or vallies, the fleſh is always of an inferior quality; when on marſhy grounds, abſolutely bad; and when in a narrow park, inſipid.

The roe is a native of both *Aſia* and *Europe*. According to *Charlevoix*, the ſpecies exiſts in great numbers in *Canada*. Although unknown in *Ruſſia*, they are among the animals of *Sweden* and *Norway* *. They are ſaid to be found in *Brazi*. In *Britain*, they exiſt no where except in the *Highlands* o *Scotland*. *Wales* can no longer boaſt of the roe. The woods on the ſouth ſide of *Loch-Rannoch* in *Perth-ſhire*; thoſe of *Langwall*, on the ſouthern borders of *Caithneſs*, with the intermediate tracts, are inhabited by this ſpecies. But they are moſt numerous in the noble foreſts of *Invercauld*, in the midſt of the *Grampian* hills †.

Although the roe of the *Highlands* of *Scotland* be unknown in *Ruſſia*, another race, allied to that in character,

* Pontoppidan, Part II. p. 9. † Britiſh Zoology, I. 50.

racter, but marked with ſome diſcriminations, inhabits all the temperate parts of *Ruſſia* and *Siberia*. It is the *tail-leſs roe* of *Pennant* *, in his hiſtory of quadrupeds and Arctic zoology. It ſeems to be merely a variety, not a diſtinct ſpecies.

This animal is larger than our common roe-buck. But its chief diſtinction is the want of a tail. It is covered with a long thick coat, of a clay-colour on the under part of the body; white on the buttocks; and on the other parts, coloured like our roe. Its horns divide like thoſe of our roe, into three branches, and are tuberculated at the baſe.

In ſummer, theſe tail-leſs roes inhabit the lofty mountains of *Hycania*, *Siberia*, and that part of *Ruſſia* which lies north eaſt of the river *Volga*. In winter, they deſcend from the mountains into the adjacent plains.

Species VI.—*Axis* †.

The axis, an animal nearly of the ſize of the fallow-deer; its horns dividing into three branches, all pointing upwards, and its tail being of the ſame length as that of the fallow-deer.

But of this ſpecies there are ſeveral varieties, differing in ſize and colours.

The *ſpotted axis* ‡ is of a light red colour, has its body beautifully variegated with white ſpots, and is marked on the lower part of its ſides, next the belly, with a line of white. The tail is red above, and white beneath.

Pliny

* *Cervus Pygargus* of the Syſt. Nat. I. 175.
† Hiſt. Quad. I. 105.
‡ Syſt. Nat. I. 179.

Pliny mentions this as an animal of *India* ſacred to *Bacchus*, characterizing it by the reſemblance which it bears to a fawn, and its being ſprinkled over with white ſpots *. The ſame ſpecies ſtill abounds in *India* †. On the banks of *Ganges*, and in the iſland of *Ceylon*, they are very common. From *India* they have been introduced into *Europe*. Nor is the temperature of our *European* climates at all unfavourable to them. In the King of *France*'s parks, they have multiplied into flocks ‡. In the Duke of *Richmond*'s parks in *England*, they are ſaid to have propagated with the fallow-deer §. They have alſo bred in the Prince of *Orange*'s parks near the *Hague*. In their manners, they are mild and peaceable, and refuſe not the familiarity of mankind. Their powers of ſmelling are ſo exquiſite, that though they readily eat bread from the hand, they refuſe a piece which has been breathed on.

Nearly of the ſame figure, but larger, and never ſpotted, but ſometimes varying in colour from light red to white, is the *middle-ſized axis* of *Pennant* ||, an inhabitant of the dry, hilly foreſts of *Borneo*, *Java*, *Celebes*, *Ceylon*, and probably *Sumatra* ¶. Hundreds are often aſſociated in one herd. They grow very fat, and are often purſued in *Java* and *Celebes*, by numerous hunting parties, who kill multitudes in one expedition. Their fleſh, either ſalted or freſh, is excellent food. The tongue is a delicacy. The hides are articles of traffic.

A pair of horns, ſimilar in ſhape to thoſe of the above varieties of the axis, but conſiderably larger and ſtronger,

* Nat. Hiſt. Lib. VIII. c. 21.

† Newhoff's Travels in Churchhill's Collection, II. 298.

‡ Smellie's Buffon, VI. 233. § Idem, VI. 238.

|| Hiſt. of Quad. I. 106. ¶ Marſden's Sumatra, p. 94.

er, not leſs than two feet nine inches long, and two feet four inches from tip to tip, are to be ſeen in the *Britiſh Muſæum*. They are conjectured to belong to a ſtill larger variety of this ſame ſpecies; a variety, which, as Mr. *Pennant* was informed by Mr. *Loten*, are as tall as a horſe, and inhabit the low, marſhy grounds in the iſland of *Borneo*.

SPECIES VII.—*Virginian Deer* *.

THE *Virginian* deer are a diſtinct ſpecies, common to all the provinces of *North America*, ſouth of *Canada*, but more numerous in the more ſouthern.

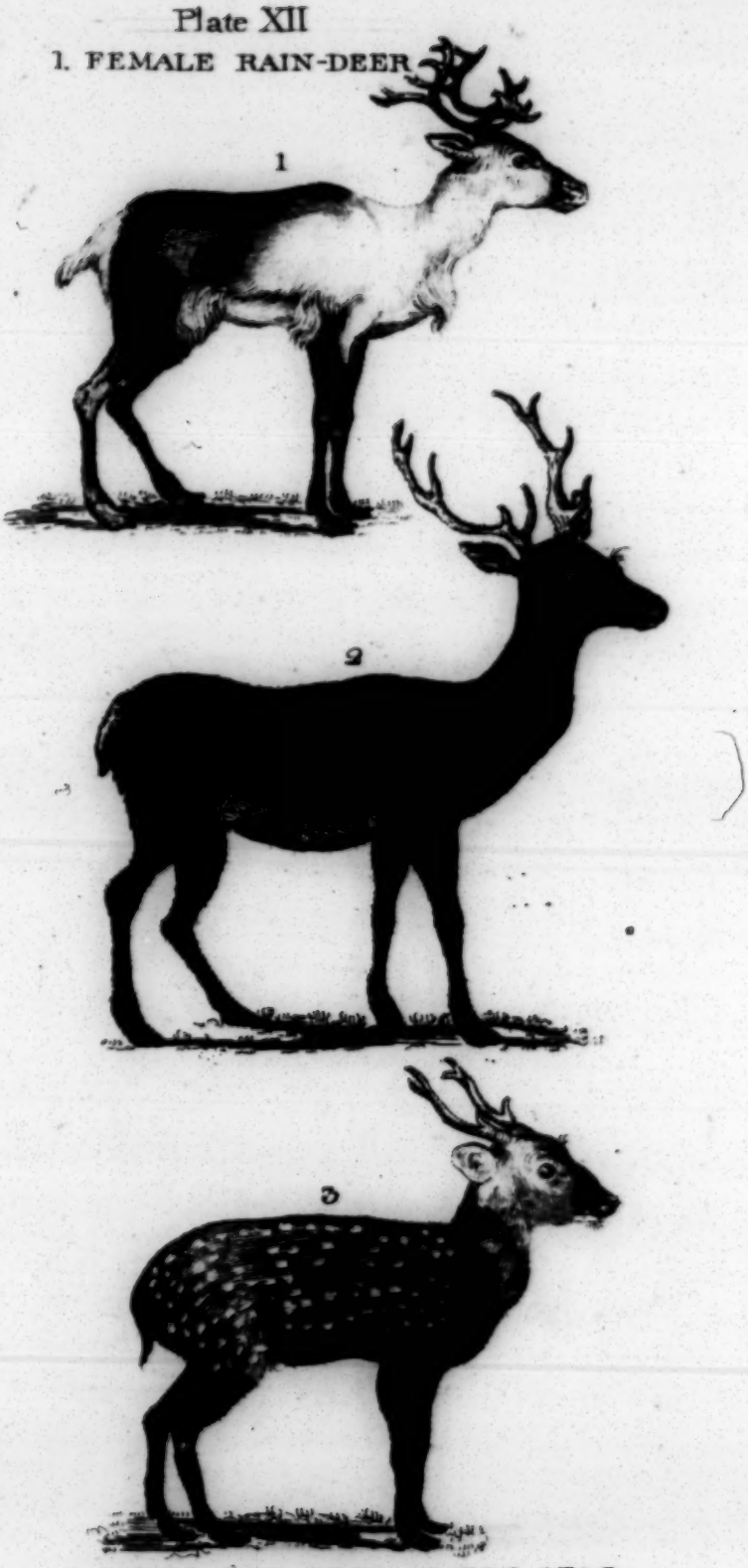
Their horns are ſlender, with numerous branches on the interior ſides, and much bent forwards, but without brow antlers. They are nearly of the ſame ſize as the *Engliſh* fallow-deer,—only ſometimes rather larger. Their colour is a light cinereous brown; the length of the tail ten inches.

They are numerous on the extenſive plains lying along the *Miſſiſippi* and the rivers that run into it. They are very probably likewiſe natives of *Guiana*. Their rutting ſeaſon is in *September*. From *September* till *March*, the bucks and does herd together. The does then retire to bring forth, and live apart till, with the return of autumn, both they and the bucks again feel the influence of the genial paſſion. They are wandering reſtleſs animals. Near the ſhores, they are infeſted by inſects, which depoſite their eggs on the head and throat of the deer; and worms are of conſequence generated in theſe parts.

* Cervus Virginianus of the Syſt. Nat.

Plate XII

1. FEMALE RAIN-DEER



2. SMALL RED-DEER 3. HOG STAG

parts. From this and other cauſes, they are, in ſuch paſtures, always lean, and in a bad condition. On the hills and inland plains, they are not expoſed to the ſame annoyances, and accordingly thrive better. They are fond of ſalt, and reſort eagerly to places impregnated with it. Their ſkins have been an important article of commerce to the ſtates, particularly of *New York* and *Pennſylvania*.

They are objects of great conſequence to the Savages. War and the chace are the two great employments which occupy thoſe ſimple people. The chace is a noble and intereſting diverſion. It not only affords the means of ſubſiſtence, but prepares the hunter for enduring the fatigues, and practiſing the arts and ſtratagems of war. Vaſt numbers of thoſe deer are annually deſtroyed by the *Indian* hunters; who either ſurround them, fire the woods in which they are ſheltered, and, driving them into ſome peninſula or narrow defile, ſlaughter crowds at once, without difficulty;—or, with greater artifice, diſguiſe themſelves in the ſkins of deer formerly killed, having the heads and horns ſtill appended to them, and thus deceiving the unwary animals to approach familiarly, ſlay them before they can ſuſpect their danger.

SPECIES VIII.—*Mexican Deer* †.

THIS animal, in colour and figure reſembling our *Europæan* roe, but of a larger ſize, and furniſhed with horns of a different form, is confined, perhaps, to the ſouthern

† *Cervus Mexicanus* of the Syſt. Nat. Mazame of Buffon.

regions of the new world; to *Mexico*, *Guinea*, and *Brazil*. Its head is large; its neck thick; its eyes large and bright. The ſkin of the young is marked with white rays. Its horns are ſtrong, thick, rugged, and bent forwards; trifurcated at the upper part, and furniſhed beſides, with a ſharp erect ſnagg, ſeparating from the trunk of the horn, about an inch and an half above the root. It does not live always retired in the interior parts of the country; but ventures out, at times, upon the borders of the plantations. Its fleſh is not equal to that of our *Europæan* roe.

The *Sceenootung*, an animal that has been obſerved in the countries weſt of *Hudſon's bay*, is imagined to belong to the ſame ſpecies

Species IX.—*Porcine Deer* *.

The Porcine Deer is an oriental animal, about three feet ſix inches long, and nearly two feet and a half in height. The figure of its body is thick and clumſy, like that of a hog. Its legs are ſlender and elegant. Its horns are thirteen inches long; its tail eight; its head ten and a half. The upper part of the neck, body, and ſides, is brown; the body and ſides are lighter coloured.

They are natives of *Borneo*; and the late Lord *Clive* brought one to *England* from *Bengal*. They are entrapped in pit-falls dug in the ground, and covered over with ſlight materials, on which they heedleſsly truſt themſelves. Their feet are uſed for tobacco ſtoppers.

* Hiſt. of Quad. I, 107

Species X.—*Muntjac or Rib-faced Deer* *.

This deer is peculiarly characterized by three longitudinal ribs extending between the horns and the eyes. Its horns are ſupported on a boney proceſs, covered with hair, and riſing three inches above the ſcull. They are trifurcated, and have the upper fork hooked. The upper jaw is, on each ſide, armed with a tuſk.

The muntjac is ſhaped like the porcine deer, but inferior in ſize to the *Britiſh* roebuck. Like the roe, this ſpecies aſſociate only in families. They are inhabitants of *Java* and *Ceylon*.

Species XI.—*Grey or Guinea Deer* §.

This deer is of the ſize of a cat; with long ears; grey on the upper part of its body, but black below; and marked between the eyes with a black line.

This is an obſcure ſpecies. The only deſcription of it was furniſhed by *Linnæus*: And, as the horns were wanting in the ſpecimen which he examined, he could not determine certainly whether it were a deer, a muſk, or a female antelope.

* Syſt. Nat. I. 180. Hiſt. of Quad. I. 107.

§ Syſt. Nat. I. 181. Hiſt. of Quad. I. 111

Genus VIII.—*Muſk Animal.*

An odoriferous ſubſtance produced by ſome of theſe animals, and which has long been uſed in perfumery and medicine, is what has chiefly recommended them to notice. That ſubſtance was long known and valued in *Europe* before any authentic information could be obtained concerning the circumſtances, form, and manners of the animals that afforded it.

The ſpecies referred to this genus, do not all afford muſk; but all agree in wanting horns, and in having their mouths furniſhed, like the ruminating animals, with eight ſmall teeth in the lower, but none in the upper jaw; with the addition of two long tuſks in this jaw, inſtead of cutting teeth.

Species I.—*Tibet Muſk.*

In form, this animal reſembles a ſmall roebuck. It meaſures three feet, three inches in length, and in height between two and three feet. Its upper jaw is conſiderably longer than the lower. Its tuſks are nearly two inches long, and project, naked, beyond the lower jaw. Its ears are long and narrow, within of a pale yellow, and without of a deep brown colour. The hair of the body is very long, and ſtands erect; each hair is marked from tip to root with ſhort waves; the colour at the roots of the hair is black, in the middle cinereous, and at the tips ferruginous. Each jaw is armed with ſix grinders. The hoofs are black, long, and divided for a conſiderable length.

length. The tail is only an inch long, and hid in the hair. The female is ſmaller than the male, has a ſharper noſe, wants the two tuſks, and has two ſmall teats, but no muſk bag. The male is furniſhed with a ſmall bag, of the ſize nearly of a hen egg, ſituated under the prepuce, near the extremity of the genital organ, and containing the celebrated muſk. It has the appearance of a brown fat friable matter, and may be ſqueezed out by the orifice of the bag. Before the animal attains its full growth, the bag is empty. In adult males it contains uſually a drachm and a half or two drachms of muſk.

This animal is a native of *Aſia*, and is found between 44° or 45°, and 60° of north latitude. It inhabits the kingdom of *Tibet*, the province of *Mohang Meng* in *China*, *Tonquin* and * *Bontan*. In the *Ruſſian* dominions, and on the confines between *Ruſſia* and *China*, it is found in the country around the lake *Baikal*, and near the rivers *Jeneſea* and *Argun*.

Naturally a mild and timid animal, the *Thibet* muſk, in the rutting ſeaſon, in the months of *November* and *December*, acquires new courage from the impulſe of love. Rival males then combat fiercely with their tuſks. As it is naturally timid, ſo it is alſo ſolitary and unſocial. It ſeeks the cliffs and pine-clad ſummits of ſteep and lofty mountains; deſcending at times into the deep vales by which thoſe are ſeparated. In running, leaping, climbing, ſwimming, it diſplays aſtoniſhing agility. Few animals that the hunter purſues, lead him through greater dangers, or require him to exert ſuch addreſs and activity in the chace. But the value of the muſk cauſes danger to be overlooked; and the animal is ſhot with arrows, or taken in ſnares, or ſometimes falls

* Churchill's travels IV, 242.

falls by a ſudden diſcharge from a croſs-bow placed in its tracks. Among the many fabulous tales which were formerly related of this ſpecies, and the manner in which the muſk was obtained from them, one fact appears not improbable, that they often empty the muſk bag, and leave it in rubbing themſelves upon the rocks *. What they depoſite in this manner is ſaid to be ſuperior in quality to that which is taken from the bag. The beſt muſk is that obtained directly from *Tibet*. That of *Moſcow* and of *China*, is for the moſt part villainouſly adulterated. The fleſh, though infected, eſpecially about the rutting time, with the muſk, is tolerable food. The ſkin and hair are not without their uſes.

SPECIES II.—*Indian Muſk* §.

THIS ſpecies are inhabitants of *India*; ſomewhat larger in ſize than the former; and diſtinguiſhed by ſlender legs, oblong, erect ears, and the reſemblance which their head bears, in ſhape, to that of a horſe.

SPECIES III.—*Brazilian Muſk, or Wirrebocerra* ‡.

IN ſize, this animal approaches to an equality with the *Europæan* roebuck. Its back, ſides, cheſt, and thighs, are of a bright ruſt colour; but the lower part of the belly, and the inſide of the thighs white. Its eyes are large

* Harris' Collection, I. 537.

§ *Moſchus Indicus*, Syſt Nat. I. 173.

‡ *Moſchus Americanus*, of the Syſt. Nat.

large and black; its ears four inches long; the tail ſix inches long; the legs ſlender, yet muſcular.

Theſe creatures, peculiar to *Guinea* and *Brazil* *, are remarkable for their timidity, and for a correſpondent lightneſs of form, and agility of motion. Like goats, they are ſometimes ſeen ſtanding with their four legs together on the point of a rock. The delicacy of their fleſh draws upon them a number of enemies. The *Indians*, tygers, and other beaſts of prey, all eagerly purſue them. Their ſafety is moſt endangered when they attempt to ſwim; for their legs are but very ill adapted to that exerciſe. They are ranked in this genus, not as affording muſk, but as wanting horns.

Species IV.—*Meminna* †.

This animal, an inhabitant of *Java* and *Ceylon*, poſſeſſes alſo the generic characteriſtics of the muſk. Its form is diminutive. It is not more than one foot five inches in length. Its whole weight is only five pounds and a half. Its ears are large and open; its tail very ſhort; its ſides and haunches are variegated with ſpots, and tranſverſe bars of white on a cinereous olive ground. The reſt of the upper part of its body, is a cinereous olive, without ſpots. Its throat, breaſt, and belly are white.

* Bancroft's Guinea, p. 123.

† Syſt. Nat. I. 174. Hiſt of Quad. I. 115: Indian Muſk of Pennant.

Species V.— *Java Muſk* *.

Peculiar to *Java* is another animal of this genus, equal in ſize to a rabbit, with remarkably ſlender, puny legs; with its ſnout and ears bare, without pits in the groin, or under the eye; having tufts on its knees; and under its throat, two long divergent hairs. The neck is hoary, with an intermixture of yellow; a black line marks the crown of the head; the general colour of the body is ferruginous; the neck and belly are white, but the neck variegated with two duſky ſpots. The tail is of a moderate length, and terminates in a white tuft.

Species VI.—*Guinea Muſk* §.

This animal, notwithſtanding its name, is an inhabitant of the continent of *India*, and the *Oriental* iſlands, rather than of *Guinea*. It is only nine inches and a half in length; has two ſmall tuſks in its upper jaw; large ears; and a tail an inch long. Its belly is white, and the reſt of its body tawny; but the ſpecimens vary in colour. Among the *Malays*, they are caught in great numbers, carried to market in cages, and ſold at a very moderate price.

* Syſt. Nat. I. 174. § *Moſchus Pygmæus*, of the Syſt Nat. I, 173.

Plate XIII



1 INDIAN MUSK 2 CAMEL 3 DROMEDARY

GENUS IX.—*Camel.*

THIS genus of quadrupeds are characterized, by wanting cutting teeth in the upper jaw; having the upper lip divided in the ſame manner as hares; having ſix cutting teeth in the lower jaw; ſmall hoofs; and neither ſpurious hoofs nor horns.

1. *Arabian Camel* or *Dromedary, with only one bunch on the back* *.

THE height of this animal, from the top of its bunch to the ground, is ſix feet ſix inches. Its head is ſmall; its ears are ſhort; its neck long, ſlender, and bending. Its hoofs are, in part, but not thoroughly, divided. The bottom of the foot is tough and pliant. The tail is long, and terminates in a tuft, alſo of conſiderable length. On the legs this animal has ſix calloſities; four on the fore legs, and two on the hinder; beſides another on the lower part of the breaſt. Theſe are the parts on which it reſts. Its hair is fine, ſoft, and of conſiderable length; longeſt indeed, upon the bunch, the neck and the throat. In the middle of the tuft, terminating the tail, the hair is ſoft and fine; on the exterior parts, coarſe, and often black. On the protuberance it is duſky; over the reſt of the body, of a reddiſh aſh colour. Beſides the ſame internal

* Καμηλος Αραβιος of Ariſtotle: *Camelus Arabicus* of Pliny: *Dromedary* of the tranſlator of Buffon: *Camelus Dromedarius* of the Syſt. Nat. *Camel with one bunch* of Pocock, Shaw and Ruſſel: *Djammel* of the Arabians.

internal ſtructure as other ruminating animals, the camel is furniſhed with an additional bag, which ſerves as a reſervoir, to contain a quantity of water, freſh and pure, till it become neceſſary to quench his thirſt, and macerate his food.

The *Arabian* camel poſſeſſes the powers of ſenſation in high perfection. His eye is ſufficiently acute. He is ſaid to ſmell water at half a league's diſtance. His taſte indeed is not very refined; for he eats with high ſatisfaction, thiſtles, acacia ſhrubs, and other inſipid plants of a ſimilar nature. His ear is not inſenſible to the power of muſic. Even in his native climate, and in the beſt condition, he has a pitiful, complaining aſpect. His manners are gentle, peaceable, and ſubmiſſive. The unruly horſe ſubmits to reſtraint, and receives a rider or a burden, with indignant impatience; but the camel kneels obligingly, till his maſter load him, or mount upon his back. Though of a heavy and apparently unwieldy form, this animal moves with conſiderable ſpeed. With a bale of goods on his back, an ordinary camel will travel a journey of many days, at the rate of ſeven or eight leagues a-day *. Dromedaries of a ſuperior breed, and trained, not for beaſts of burthen, but ſolely for the purpoſes of travelling and war, have been known to travel at the rate of thirty leagues a-day; though bearing, each two or three ſoldiers, with their war equipage †. Yet it is not the quickneſs of his motions, but the length of his legs, his travelling with a ſteady, equal pace, and his ſeldom needing to ſtop for reſt or refreſhment, that enables this animal to perform ſuch journies.

The

* D' Obſonville's eſſays on the manner of various foreign animals. Engliſh tranſ. p. 173. † *Idem* p. 174.

The paſſion of love exerts the ſame infuriating influence on this as on the other ſpecies of the animal creation. His negligence of food, his wild cries, the foam iſſuing from his mouth, and the reſtleſſneſs of his motions, all indicate, how violent the impulſe which he then feels *. Becoming a ſtranger even to the perſon of his maſter; his jaws muſt be confined with a ſtrong muzzle, otherwiſe he bites furiouſly and indiſcriminately. The female kneels to receive the male, who crouches behind to cover her. After going nearly a year with young, ſhe brings only one at a birth; which ſhe ſuckles and rears with due tenderneſs. It is left under her care for twelve months. A dromedary lives at leaſt forty or fifty years.

The dromedary is an inhabitant of the warmer regions of the globe. The ſandy deſerts of *Arabia* are his favourite abode. But the ſpecies wander northward to the confines of *Siberia* †. They are numerous in *Perſia* ‡. They have in all ages, been known in *Syria* and *Paleſtine* ||. They have penetrated even into *Barbary* and *Morocco* ¶, and the burning regions near the line. They abound in *Indoſtan* and *China*, and other countries in the *Eaſt Indies*. Not only the negroes, but alſo the camels of *Africa* have been introduced by the *Europæan* planters into the *Weſt India* iſlands. Attempts have been made to enrich *Europe* with this ſpecies. But thoſe which have been imported, have all either died without procreating their ſpecies, or produced a puny, ſickly, progeny that ſcarce ſurvived their birth. Yet in the drier and more mountainous parts of

* D' Obſonville, 175. † Syſt. Nat. I. 168.
‡ Ruſſel's Nat. Hiſt. of Aleppo. Shaw's Travels. Volney, II. 419.
|| D' Obſonville, *ubi ſupra*. Haſſelquiſt, p 189. ¶ Chenier, I, 165.

Tartary, *Perſia*, and *Turkey*, where the temperature of the air is not milder than in the ſouthern countries of *Europe*, camels thrive even better than in hotter climates; a circumſtance which affords a preſumption, that judicious treatment might preſerve and multiply the ſpecies, at leaſt in *Italy*, *France* or *Spain*.

Were it not for the camel, the wilds of *Arabia* would ſcarce be habitable by mankind. Its ſandy plains muſt have hitherto remained unexplored, did not he preſent himſelf to conduct the traveller through thoſe dreary regions. He who is by any unfortunate accident deprived of his camel in that journey, inevitably periſhes. In vain might the *Arab* expect his horſe to convey him through a country where he muſt travel, perhaps for a long ſeries of days, without approaching any human habitation; without finding a brook, a well, or even a puddle, from which he might quench his thirſt, or a few tufts of graſs to allay his hunger. The graceful form, the keen ſpirit, the generous magnanimity of that animal, qualify him not for ſuch a taſk. But the camel, patient, ſubmiſſive, and indefatigable; unſubdued by toil, by heat, by hunger, or by thirſt; content with little food, and that little of the ſimpleſt kind; carrying in his belly a capacious reſervoir, from which he can quench his thirſt; and having his feet armed by nature with a tough and yielding ſubſtance on which ſlipping ſand or pointed ſtones can make no impreſſion; this animal is deſtined to enlarge the abilities of man, and to aſſiſt him to triumph over the auſterity and barrenneſs of nature. His ſize and ſtrength enable the camel to bear without difficulty, not only a rider, but the baggage and proviſions which

which his rider may need in a long journey: for himſelf but little proviſion is neceſſary. A few balls of flour prepared from beans or barley, or a ſmall quantity of theſe ſubſtances in their natural ſtate, are all that he needs, in addition to the ſhrubs of the deſert. The milk of the female diluted with water, or even drunk without dilution, affords a pleaſant ahd wholeſome beverage. In caſes of extreme diſtreſs, when his proviſions are all conſumed, and his leathern bottles entirely emptied of water, the traveller before ſinking in deſpair, to periſh of thirſt and hunger, kills his camel, drinks the water remaining in the reſervoir in his ſtomach, and makes a meal on his fleſh. Few travellers have ever had greater occaſion to try the perſeverance of the camel, and receive all the ſervices which this animal is capable of affording, than Mr. *Bruce*, on his return from the court of *Abyſſinnia* to *Cairo*: On his way between *Sennaar* and *Syene*, in the deſerts eaſt of the *Nile*, after a long and dreary journey, in which he and his artendants had exhauſted their proviſions, to the laſt remains of "their "miſerable flock of black bread and dirty water;" the ſtrength of his camels was ſo far overcome, or ſo much were they benumbed by cold, that no arts nor efforts could raiſe them from the ground; or at leaſt, prevail with them to ſtand but two minutes, without kneeling down again. In this hopeleſs ſituation, his only reſource was, to kill two of thoſe fainting animals, to draw out the water that remained in their ſtomachs for drink, each affording about four gallons, and take a part of their fleſh for food *. The ſame traveller relates, that the camels of the caravans, which travel from the *Niger*, acroſs the deſert of *Selima*, are ſaid to take at once, as much

* Bruce's travels, Vol. IV. p. 596.

much water as they need for forty days. He aſſerts as an unqueſtionable fact, that even an ordinary camel will live, upon occaſion, fourteen or fifteen days without water.

Mankind owe alſo other benefits to this animal. The *Arabs*, and other nations among whom they are common, uſe their fleſh and milk, not merely in caſes of extreme neceſſity, but even for their ordinary food. The fleſh is dry, but of an agreeable enough taſte; though, except for feaſts, none are ever killed but the old, and thoſe without any pains being taken to fatten them. The milk is wholeſome, nouriſhing, and antiſeptic; but always faintly acid in its taſte *. In the more temperate latitudes of *Aſia* and *Africa*, the hair is of a ſilky fineneſs, and ſells at a conſiderable price. It is wrought into ſome valuable ſtuffs. His ſkin is another article of great value. Camel's dung is the only fuel which travellers to kindle their fires of, in the deſert. If dry, it kindles inſtantaneouſly, and affords a ſtrong heat, and a bright flame.

No wonder then, that the *Arabians* have, from the earlieſt ages, aſſiduouſly availed themſelves of the ſervices which this animal is qualified to afford. Six thouſand camels were part of the immenſe wealth of the patriarch *Job*; to tend, to train, to improve the breed, and to multiply the numbers of their camels, is to this day the chief employment of many of the *Arabians*. In tracing the annals of remote antiquity, we cannot diſcover the period when camels exiſted only in a wild ſtate. But ſo gentle an animal, would, the inſtant he became known to man, be ſubjected to his authority. In *Egypt*, the camel

* D' Obſonville, p. 176.

camel has been perhaps as long known and ſerviceable as in *Arabia*. He is there uſed chiefly as a beaſt of burden. A loaded camel travels between *Cairo* and *Suez*, a journey of ſix and forty hours, without needing either food or water. The food on which the *Egyptians* ſuſtain him, is bruiſed ſtones or kernels of dates *. The *Perſians* have ſeveral excellent breeds of camels. Their ſtrongeſt, which they call *Chotornain*, carry a load, a thouſand or eleven hundred pounds in weight. Thoſe of a ſecondary character, called in *Perſia*, *Chotor*, in *Arabia*, *Jemal*, and in *Indoſtan*, *Oatt*, bear ſix or ſeven hundred. The feebleſt race, named in *Arabic*, *Ragahill*, carry at leaſt five hundred. When the camel-drivers wiſh their camels to quicken their pace, they chant to them wild, irregular airs, or beat rude tunes on ſmall kettle drums. The *Perſians* have yet a more delicate, and better ſhaped breed, denominated, in their language, *Chotordor*, or *Chotobaad*; and by the *Arabians*, *Deloul*, or *Elmecharis*. Theſe they train to make long marches, and feed with choice and ſubſtantial food †. In the *Engliſh* dominions in *India*, the temper of the camel is ſaid to be ſo froward, and his motions ſo violent, that the days of his *Hircarah* or groom are frequently ſhortened by the trouble and fatigue which he ſuffers in managing him. Wild camels are ſaid to ſubſiſt ſtill in the deſerts, in the temperate latitudes of *Aſia* §.

Many of the above particulars, concerning the manners and uſes of the dromedary or camel with one bunch, regard alſo the next ſpecies, the *Bactrian* or *Turkiſh* camel, who is furniſhed with two bunches.

* Haſſelquiſt, p. 189.

† D' Obſonville, p. 173. § Syſt. Nat. I. 168.

11 —*Bactrian* or *Turkiſh Camel* *, *with two bunches on the back.*

EXCEPT in having two bunches on the back, inſtead of one, this ſpecies ſcarce differs from the preceding. They ſeem rather another variety, than a diſtinct ſpecies. Their ſize, their colours, their qualities, their uſes, are almoſt entirely the ſame.

Next after that which the bunches conſtitute, the moſt remarkable difference is, that the *Arabian* camel or dromedary thrives in the moſt torrid climates of *Aſia* and *Africa*, where he is gentle, but ſlender, and almoſt deſtitute of hair; whereas the camel inhabits the more temperate climates, and is often larger, and of ſuperior ſtrength, moves with a firmer ſtep, and is covered with finer hair. *Tartary*, *Turkey*, and *Perſia*, are the regions which the camel chiefly inhabits. Dromedaries are moſt numerous in *Arabia* and *Barbary*.

February is the ſeaſon of copulation to theſe animals. The female is a year pregnant; produces only one at a birth; and ſuckles her young for two years. The *Arabian* merchants, every year, conduct troops of dromedaries into the provinces of *Turkey* and *Perſia*; where they procure camels to copulate with them; and by thus croſſing the breed, obtain a mongrel race, in whom the vigour of the camel is united with the mild docility of the dromedary §.

Wild

* Camelus Bactrianus of the Syſt. Nat. Καμηλος Βακτριος of Ariſtotle; *Camel* of Buffon; *Perſian Camel* of Ruſſel, in his hiſtory of Aleppo.

§ D' Obſonville.

Wild camels are ſtill found in the northern parts of *India*, and in the deſerts on the confines of *China*. They are poſſibly deſcended from a domeſtic race that may have accidentally become wild. *Dr. Ruſſel* relates, that except in caravans coming from *Bagdad* to *Baſſora*, the camel with two bunches is ſcarce ever ſeen in *Syria*.

The *Perſian* name of the camel is *Chotortork* or *Boghor* *.

III.—*Llama* or *Peruvian Camel* †.

In form and manners, this *American* quadruped bears ſo conſiderable a reſemblance to the dromedary and camel of *Aſia* and *Africa*, that notwithſtanding the inferiority of its ſize, naturaliſts agree in conſidering it as a congeneric ſpecies. The Llama is ſcarce four feet and a half high, and not more than ſix feet in length. His neck is arched, but not ſo much as the camel's. His back does not riſe into ſo large a bunch. His tail is graceful. His feet are elegantly formed. He has a bunch on his breaſt, which conſtantly exſudes a yellowiſh, oily matter. His hair is long and ſoft. His colours are a beautiful clouding of black, white, and a duſky yellow. His body is often ſwelled with a conſiderable depth of fat, immediately under the ſkin. His head is not armed with horns; His noſe is ſhort. His hoofs are divided. His eyes are large, black, and ſparkling. In the ſtructure of his ſtomach, he has four ventricles, one of which is cellular.

* D' Obſonville. † *Llama* of Voyages and Travels, *Buffon* and *Pennant*; *Glama* of Ray and the Syſt. Nat.

He has neither cutting nor canine teeth in his upper jaw. His feet are armed behind with a ſort of ſpur, which aſſiſts in ſupporting the animal on rugged, difficult ground. His wool or hair is long on his flank and belly but ſhort on his back, crupper, and tail.

His voice is a ſort of neighing ſound. Though naturally mild and inoffenſive, he defends himſelf when teazed or attacked, by butting, kicking, and ſquirting at his enemy, through a fiſſure in his upper lip, an acrid ſpittle which inflames and bliſters the ſkin. His motion is ſlow; he bears up his head and walks on with a grave, regular, majeſtic pace. He eats but little; and ſcarce ever drinks. His food is the coarſeſt, and moſt ordinary plants. With the mildneſs, the Llama poſſeſſes alſo the obſtinacy of the camel. He cheerfully receives any load to which his ſtrength is not unequal; and if the place to which his burthen is to be conveyed, be known to him, proceeds to it without a guide. But when overloaded, or fatigued with travelling, he ſquats down on his belly, with his feet under him; and no ſeverity of blows will compel him to riſe. Squeezing his teſticles ſometimes ſucceeds, when every other art has been tried in vain. By continued abuſe, the poor animal is ſometimes driven to deſpair, and ſtrikes his head from ſide to ſide upon the ground, till he die.

He feels the tranſports of the genial paſſion, in the end of Summer, or beginning of Autumn. They actuate him with extraordinary violence. Yet the ſtructure of the parts of generation in both the male and the female, renders copulation a very tedious and difficult taſk. The male Llama ſometimes compels ſhe-goats to receive his embraces

embraces; but does not impregnate them. The female Llama goes five or ſix months with young; never produces more than one at a birth, and is furniſhed with two paps to ſuckle it. The young male becomes capable of procreation, at the age of three years. The term of his life never extends much beyond fourteen years.

Peru is the native country of the Llama. He has been ſettled by nature, on the mountains of that elevated tract of country. The ſpecies at preſent abound through the whole extent of the kingdom of *Peru*, from *Potoſi* to *Carraccas*; and the induſtry of the *Spaniards* has propagated them through other parts of their *American* dominions.

When the *Spaniards* firſt penetrated into South *America*, they were aſtoniſhed to find it deſtitute of the domeſtic animals, to which they had been accuſtomed in *Europe*. The *Indians* had no horſes, oxen, aſſes, or mules, to aſſiſt their induſtry. The Llama and the Pacos were the only animals which they cultivated as domeſtic. And to ſee them uſe ſheep,—for ſuch did theſe ſeem,—as beaſts of burthen, heightened the contempt which their *European* viſitants had conceived for their characters. There appeared a remarkable ſimilarity between the temper and manners of the Llama, and thoſe of his *Indian* maſter. The ſame mildneſs, the ſame cool, phlegmatic temper, the ſame perſeverance in labour diſtinguiſhed both. Rude and inartificial as were the manners of the ſimple *Peruvians*; they had, however, learned, not only to load the Llama, as a beaſt of burthen, but alſo to yoke him in the plough.

The *Spaniards*, upon ſettling in *Peru*, ſoon found, that this ſpecies whom they had thought too pitiful to be cultivated as the principal domeſtic animal, was not ill qualified for the labours in which the nature of the country induced them to have recourſe to its aſſiſtance. The roads were ſo rugged and uneven, that an animal, leſs ſure-footed, or of a temper leſs cool and phlegmatic than the Llama, could ſcarce travel along them with ſafety. For the labours of the mines, a creature of a more impetuous, generous ſpirit, would have been very ill qualified. The Llama conveys the ores of *Potoſi* over the moſt rugged hills, and through the narroweſt paths of the *Andes*. He fears not to deſcend precipices, and climb ſteep aſcents, where even man himſelf dares not accompany him. An hundred and fifty pounds is his ordinary load. The ſtrongeſt carry two hundred. With this load, the animal will travel on for four or five days without indicating the ſmalleſt fatigue. He ſtops to reſt, without waiting for the directions of his driver; and obſtinately repoſes four and twenty or thirty hours, before he can be prevailed with to reſume his journey. Requiring but a ſmall portion of food, he takes that by browzing as he travels, on any ſhrubs or herbage that happen to fringe his path. At night he only reſts and ruminates.

Beſides ſerving as a beaſt of burthen, the Llama affords various articles of no ſmall utility to human life. His wool, though of a ſtrong, diſagreeable ſcent, is uſed as a material for cloth. It forms likewiſe ſo thick a covering on the animal, that he needs not a ſaddle to protect his back under a load. His ſkin is of a very cloſe texture;

and

and is accordingly made into ſhoes by the *Indians*, and uſed for harneſſes by the *Spaniards*. The fleſh, eſpecially of the young Llama, is wholeſome and of a pleaſant taſte.

As our principal domeſtic animals, the horſe, the aſs, the ſheep, and the goat, have, by the cares of the *European* ſettlers, been introduced into *America*; ſo the Llama has alſo been imported into *Europe*. But the climate of *Spain*, the country into which he has been brought, has always proved too hot for this animal. *Norway*, *Scotland*, or the ſummits of the *Alps* or *Pyrenees*, might perhaps prove more favourable; the temperature of theſe regions approaching nearer to the cold of the *Andes*.

IV.— *Guanaco* *.

In form and manners, the guanaco ſo nearly reſembles the llama, that he has been viewed by ſome eminent naturaliſts, as merely a llama in a wild ſtate. But, as beſides various other diſtinctions of character, the guanaco, whether tame or wild, conſtantly refuſes with abhorrence, to copulate with the llama, we cannot heſitate to rank theſe animals as diſtinct ſpecies.

The guanaco inhabits that range of mountains in South *America*, called the *Cordilleras*. The ſeverities of winter oblige him to deſcend into the plains of *Chili* and *Peru*.

A

* *Huanacus* in the Syſt. Nat.; *wild llama* or *huanacus* of the tranſlator of Buffon; *Guanaco* or *wild lama* of Pennant.

A full grown guanaco is about ſeven feet in length; and four feet three inches in height. His ears reſemble thoſe of a horſe. His tail is formed like a ſtag's. The upper parts of his body are yellow; the lower, white. He has no protuberance on his breaſt, no bunch on his back. His fore-feet are longer than thoſe behind. He moves with a ſort of leaping pace.

This ſpecies are gregarious. On the ſummits of the *Cordilleras*, they often aſſemble in flocks of ſeveral hundreds. They are ſtronger, more active, and nimbler than the llama. Although in a ſtate of liberty, they are not ſecure from the perſecution of man. The value of their fleeces, renders them an object of profit to the *Indian* hunter. When he ſurpriſes them in places of eaſy acceſs, he cannot fail of being ſucceſsful in the chace. But, give them time to eſcape among the precipitous cliffs, which are their favourite haunts; and both men and dogs muſt deſiſt in diſappointment from the purſuit. They ſeem incapable of ſubſiſting in either a warmer climate, or a thicker atmoſphere, than that of the elevated region in which they at preſent abound.

V.—*Pacos* *.

Besides the Llama, the *Indians*, before the arrival of the *Spaniards* in South *America*, had domeſticated no other animal but the Pacos.

The Pacos, in ſhape nearly ſimilar to the Llama, but much inferior in ſize, is covered with long, fine wool, ſometimes

* *Paco* of the Syſt. Nat.; *Pacos* of Pennant, and of the tranſlator of Buffon.

ſometimes entirely black, and ſometimes of a brown colour, intermixed with yellow. In dignity it ſeems to bear nearly the ſame relation to the Llama, as the aſs bears to the horſe. The Llama bears a load of an hundred and fifty pounds; the Pacos is overloaded, if more than fifty be laid upon him.

The Pacos, as well as the Llama and the Guanaco, is confined to that ſtupendous range of mountains, which terminates the ſouthern extremity of the *American* continent. His fleece is an article of great value. It is manufactured into gloves, ſtockings, bed-clothes, and carpets. Neither the beaver of *Canada*, the goat of *Angora*, nor the ſheep of *Caramania*, affords a finer material for cloth than the Pacos. His wool feels like ſilk, and is ſold at as high a price. His fleſh is eaten, though not very delicate food.

VI.—*Vicugna.*

In the Vicugna, we have an animal which bears nearly the ſame relation to the Pacos, as the Guanaco bears to the Llama. In figure, and in the form of his tail, he ſomewhat reſembles our common goat. But his neck is twenty inches in length; his head thick, ſhort, and deſtitute of horns; his ears ſmall, erect, and ſharp-pointed. His wool is ſhorter, but ſtill finer than that of the Pacos, of a beautiful roſe-colour, and of ſuch a nature, that a dye may be eaſily fixed upon it. His belly often affords a bezoar.

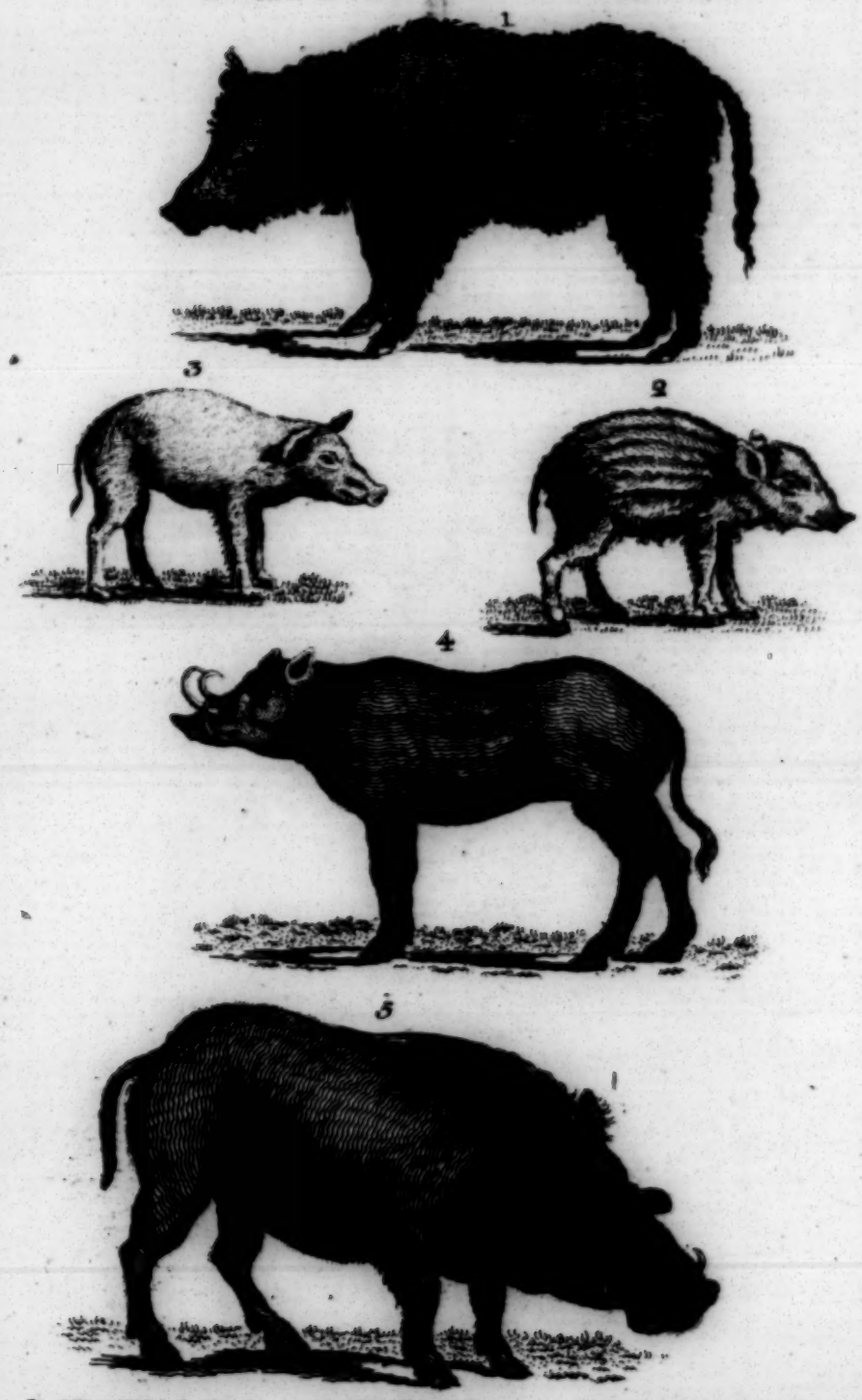
This is a wild, but a gregarious animal. Like the Llama, the Guanaco, and the Pacos, he is confined within

in that lofty range of country, which bounds the ſouthern continent of *America*. He climbs and leaps among the lofty cliffs of the *Cordilleras*. The greateſt numbers are found in provinces of *Chili*, *Coquimbo*, and *Copiapo*. Naturaliſts have generally regarded the Vicugna, as being no other than the Pacos in a wild ſtate. But, however favourable circumſtances, the intercourſe of love never takes place between theſe two animals.

The Vicugna is remarkably ſwift and timid, and formed to endure the ſevereſt extremities of cold. It is ſcarce poſſible to tame one of theſe creatures. Their fleeces are a very alluring prize to the *Indian* hunters. Their fleſh, too, is delicate and juicy. The method of taking them, is to drive a flock, or as many as poſſible, into ſome narrow defile, ſurrounded to the height of three or four feet, with cords, hung with ſmall pieces of linen or woollen cloth; theſe wave in the wind, and ſo fright and confound the timid animals, that they cannot poſſibly make their eſcape.

There are probably varieties of this, and of the three foregoing ſpecies, which have not been yet diſtinctly deſcribed by naturaliſts.

1. WILD BOAR 2. YOUNG WILD BOAR Pl. XIV.



3. SUCKING PIG 4. BABYROUESSA 5. BOAR OF CAPE VERD

GENUS X.—*The Hog.*

IN groſſneſs of manners, the hog ſtands almoſt unrivalled among the order of quadrupeds; and the meanneſs of his appearance correſponds well to the groſſneſs of his manners. His generic characters are cutting teeth in both jaws; two large cutting teeth above, and as many below; and a truncated, prominent ſnout.

I.—*Common Hog* *.



THIS animal is covered over with briſtles. The ears of our tame hog are long, ſharp-pointed, and ſlouching. White is the moſt general colour; but other colours are often intermixed in various proportions.—The wild boar of *Europe*, merely a variety of the ſame ſpecies, has under his briſtles, a covering of ſoft, ſhort, curled hair. His ears are ſhort, and ſomewhat rounded. He is of a dark, brinded colour.—The *Siam* hog is another variety, diſtinguiſhed from theſe, merely by the greater length of its tail.

In ſome reſpects the hog ſeems to form an intermediate link between the whole and the cloven footed animals; in others he ſeems to occupy the ſame rank between the cloven-footed and the digitated. Deſtitute of horns; furniſhed with teeth in both jaws; with only one ſtomach;

* *Sus, Verres, Scrofa, Sus ſera* and *aſper* of Pliny: *Le Sanglier*, and *Le Cochon* of Buffon: *Sus ſcrofa, Ferus domeſticus* and *vulgaris* of Linnæus.

mach; incapable of ruminating; and producing at one birth a numerous progeny: The union of theſe characteriſtics confers on the hog a remarkable peculiarity of character. He does not, like other animals, ſhed his fore teeth, and ſhoot out a ſecond ſet; he retains his firſt ſet through life.

Hogs enjoy none of the powers of ſenſation in eminent perfection. They indeed hear diſtant ſounds; and the wild boar diſtinguiſhes the ſcent of the hunter and his dogs, long before they can approach him. But ſo imperfect is their feeling, that they ſometimes ſuffer mice to burrow in the fat of their backs, without diſcovering any uneaſineſs, or even appearing ſenſible of the intruſion. In their taſte they ſhew a ſingular degree of caprice. In the choice of herbs, they are more delicate than any other herbivorous animal; yet devour the moſt nauſeous and putrid carion, with more indiſcriminate voracity than any beaſt of prey. Nay, at times, they ſcruple not to gorge their appetite with the living limbs of their own young: and though their ferocity and courage are ſeldom to be feared, yet even the domeſtic hog has been often known to mangle infants, out of deſperate voracity. The hog is remarkable for the ſmallneſs of his eyes. A perſon whoſe eyes are very diminutive, and deep ſunk in his head, is commonly ſaid to be *pig-eyed*. The form of the hog is inelegant; and his carriage is equally mean as his manners. His unwieldy ſhape renders him no leſs incapable of ſwiftneſs and ſprightlineſs, than he is of gracefulneſs of motion. His appearance is always drowſy and ſtupid. He delights to baſk in the ſun, and to wallow in the mire. His grunting

ing voice is well known. An approaching ſtorm ſeems to affect his feelings in a ſingular manner. On ſuch an occaſion, he runs about in a frantic ſtate, and utters loud ſhrieks of horror.

The wild boar is a nobler animal than our domeſtic hog. His ſenſes are more acute, his manners more dignified, his courage and activity greatly ſuperior. When young, they aſſociate in herds: After attaining their full growth, individuals become leſs diffident of their own ſtrength, and keep leſs carefully together. But many of the old ſtill continue to aſſociate with the young; and when danger approaches, as they are the ableſt, ſo they are the firſt to face. The wild ſow is peaceful, except when her young are injured. Parental fondneſs then prompts her to the moſt deſperate fury in their defence. The wild boar is never formidable, till rouſed and provoked. He is frequently an object of the chace. He retreats ſlowly before the dogs; diffuſing, as he flees, a ſtrong odour, by which his path is eaſily traced. Dogs find it dangerous to follow too faſt. He turns, and defends himſelf with reſolute valour, inflicting often ſevere, and ſometimes mortal wounds on his purſuers. A young wild boar, being ſwifter and more timid than the old, is not eaſily hunted down. Theſe animals are ſometimes taken by ſurpriſe, as well as by the open and more generous arts of the chace. The ſnout of the wild boar is eſteemed a luxurious diſh. His teſticles muſt be cut off immediately after he dies, otherwiſe they ſoon taint the fleſh, ſo as to render it unfit for being eaten. The young of the wild boar have been ſometimes taken and caſtrated; and after that, diſmiſſed into the woods, till they ſhould grow up and fatten.

Roots and fruits are the principal food of both the wild and the domeſtic variety of this ſpecies. They eat grains very willingly; and a proportion of ſalt mixed with their food, contributes to fatten hogs, as well as other animals. In *Scotland*, potatoes, which are raiſed in ſuch abundance, and form ſo conſiderable a part of the ſuſtenance of the poor, are alſo adminiſtered in great plenty, to gratify the voracity of the hog, and ſeem to be an article of food excellently adapted to his conſtitution. The ſnouts of theſe animals are formed for digging in the ground; and nature has taught them to employ them in that manner. Tame hogs are often very troubleſome in cultivated grounds; ploughing them up with their ſnouts, and thus entirely fruſtrating the labours of the cultivator. Worms, the wild carrot, and other roots, are the objects of their ſearch. The wild boar having a longer and ſtronger ſnout than the domeſtic, digs deeper, and continues his furrow nearly in a ſtraight line. The inhabitants of *America* find the hog very beneficial in clearing their lands of rattle-ſnakes, to whom he is a conſtant enemy, and whom he devours without ſuffering injury.

Theſe animals are fit for procreation at the age of nine, or at moſt, of twelve months. Their venereal ardour is keen and groſs. The ſow admits the boar at almoſt all ſeaſons. She brings forth in the beginning of the fifth month after conception; and, as the ſuckling of their young does not hinder her from ſoliciting the embraces of the male, in a ſhort time, ſhe often produces two litters in the courſe of the year. She generally brings a numerous progeny at a birth; her firſt litter is leſs numerous

rous than thoſe which follow. She bears often not fewer than twenty pigs at once; and is furniſhed with a number of paps to ſuckle them. Many of the pigs are killed young. A conſiderable number of the males which are preſerved to be be brought up, are caſtrated at the age of ſix months, or earlier. Theſe animals, when ſuffered to ſee the natural term of life, live from fifteen to five and twenty, or thirty years. Their ſize and ſtrength continue to improve, till the fifth or ſixth year. They are infeſted by lice, and afflicted by ſcurvy, meaſles, and other diſeaſes which attend a ſcrophulous habit of body.

Almoſt every region over the globe poſſeſſes animals of this ſpecies, either in a tame, or in a wild ſtate. They are indeed found to be incapable of ſubſiſting in *Kamtſchatka*, and the frigid zones, where the cold is too intenſe for their conſtitutions. Wild hogs abound through all *Europe*, except in the *Britiſh* iſles, and the countries North of the *Baltic*. They are equally diffuſed through *Aſia*, from *Syria* to the borders of the lake *Baikal*; and in *Africa*, on the coaſt of *Barbary*. They abound in the *Oriental* iſles, *Ceylon*, *Celebes*, and *Java*. They were not originally natives of *America*; but, being introduced by the *European* ſettlers, they have multiplied in the warmer climates of that hemiſphere, to an aſtoniſhing degree. Vaſt droves of wild hogs inhabit the foreſts of *South America*; which appear to be merely the deſcendants of thoſe originally introduced from *Europe*, relapſed, in the courſe of time, into a ſtate of nature.

Contemptible

Contemptible as he may appear, the hog is, in a very conſiderable degree, beneficial to mankind. His fleſh is a pleaſant, ſubſtantial, and not unwholeſome article of food. It affords numberleſs materials to the table of the *Epicure*; and among others, brawn, a preparation peculiar to *England*. The paps of a fat, pregnant ſow, newly cut off, was a diſh in high reputation among the luxurious eaters of ancient *Rome*. Pork is always an important article among naval ſtores. It takes ſalt better than the fleſh of any other animal; and is, of conſequence, preſerved longer. The lard of the hog is uſed by the apothecary in the preparation of various plaiſters, and other medicines; and is made by the perfumer into pomatum. The briſtles are made into bruſhes; and likewiſe uſed by the ſhoemaker. The ſkin is made into coverings for pocket-books, ſaddles, and ſeveral other articles. I have heard of an economical epicure, who being unwilling to loſe even the ears of his hogs, had them dreſſed into pies.

Jews and *Mahometans* religiouſly abſtain from pork. To tranſgreſs any precept in the code of morality, appears to them ſcarce ſo heinous a crime, as to eat a piece of a ſow's cheek.

II.—*Chineſe Hog* *.

THE *Chineſe* hog is diſtinguiſhed from the hogs common through *Europe*, by having the upper part of its body almoſt

* *Porcus Sinenſis* of the Syſt. Nat.; *Chineſe Hog* of Pennant, and of the tranſlator of Buffon.

almoſt bare, its belly hanging nearly to the ground, ſhort legs, and a tail ſtill more diſproportionately ſhort. This ſpecies are alſo of a ſmaller ſize; and their fleſh is whiter and more delicate. Their colour is commonly a dark grey. They abound in *China*, and are alſo diffuſed through *New Guinea*, and many iſlands of the *South Sea*. The *New Hebrides*, the *Marqueſas*, the *Friendly*, and the *Society* iſles poſſeſs this ſpecies; and the inhabitants of theſe iſlands cultivate it with care, as it is almoſt their only domeſtic animal. The *Chineſe* hog is found likewiſe in *Batavia* *, *Sumatra*, and other *Oriental* iſlands: The *Sumatran* name is *babee* †. They have been even introduced into *France* ‡.

In the iſlands of the *South Sea*, the hog, being the principal quadruped, is more carefully cultivated than among us. Bread-fruit, either in the natural ſtate, or made into ſour paſte, yams, eddoes, and other vegetables, are the food on which it is nouriſhed. Such a choice of food renders the fleſh juicy and delicious; and the fat not leſs rich, nor leſs agreeable to the taſte than the beſt butter §. The *Otaheiteans*, and the inhabitants of the other iſlands in the Southern ſeas, in which theſe animals are found, often preſent roaſted hogs at their morais, as acceptable offerings to the deities whom they worſhip; covering the offering with a piece of fine cloth, and leaving it to decay near the ſacred place.

We are ignorant concerning the original introduction, as well of hogs as of men, into thoſe iſlands. But it has been

* Hawkeſworth's Voyages, IV. 204. † Marſden, p. 93.

‡ Smellie's Buffon, III. 524.

§ Forſter's Obſervations in a Voyage round the World, p. 188.

been conjectured, that the former may have proceeded from the continent of the Eaſt, and penetrated, by degrees, from iſland to iſland, till they at length advanced ſo far as the *Marqueſas* *.

III.—*Mexican Hog* †

In ſize and figure, this animal bears an imperfect reſemblance to the hog of *China*. Its body is about three feet in length. Its mouth is furniſhed with four cutting teeth in the upper jaw, with ſix in the lower, and with two tuſks in each. Its head is not of ſuch a taper, wedge-like form as that of the common hog. Its ears are ſhort, erect, and pointed. Its eyes are neither ſunk nor prominent. The briſtles covering its body, are longer and more ſtiff than thoſe of the former ſpecies. They reſemble indeed, rather the quills of the porcupine, than the briſtles of the hog. On the neck and back they are longer than on the ſides. The belly is almoſt entirely bare. A band of white extends between the ſhoulders and the breaſt. There is no tail to protect the hinder parts. A gland on the back from which there conſtantly diſtills a wheyiſh, fœtid liquor, is the moſt remarkable peculiarity of this ſpecies. The firſt *Europeans* who became acquainted with this animal, fancied this gland the navel, prepoſterouſly diſpoſed by nature on the back, inſtead of the belly.

The

* Hiſt. of Quad. I. 129.

† *Tajaſſu* of the Syſt. Nat.; *Cojametl* of the native *Mexicans*; *Pecari* or *Tajacu* of de Buffon; *Peccari* of various travellers.

The manners of the *Mexican* hog are not very different from thoſe of the hogs of *Aſia* and *Europe*. *Mexico*, and all the warm climates of South *America*, poſſeſs numerous herds of this ſpecies *. Their inſtincts and arms for offence and defence, are the ſame as thoſe of our hog. They ſeem more ſocial in their diſpoſitions. They are generally found aſſociating together in parties. Though only an individual be ſingled out, the whole body join with generous valour againſt an enemy. They grunt with a ſtronger and harſher voice than the hogs of *Aſia* or *Europe*; but are ſcarce ever prompted by either fear or rage, to ſqueak in the ſame wild tone. Foreſts are their favourite haunts; they reſort not, like our domeſtic hog or wild boar, to marſhes and mires. Fruits, ſeeds and roots, are their favourite food. They eat alſo ſerpents, toads, and lizards; and diſplay great dexterity in tearing off the ſkins of thoſe reptiles with their feet.

Their œconomy has not been very minutely ſtudied by naturaliſts. A number of young ones are produced at a birth; and the mother treats them with the tenderneſs and ſolicitous care of a parent. Although exiſting chiefly in a wild ſtate, they are ſuſceptible of domeſtication; but no pains can overcome their natural ſtupidity and indocility. The beaſts of prey, not leſs than man, are hoſtile to this ſpecies. The *American* leopard, or *Jaguar*, one of their moſt formidable enemies, often falls amid a herd, after deſtroying the greateſt part of them; weary with ſlaughter, and rather exhauſted by his own exertions than overcome by theirs. If killed in full health, the fleſh of this animal is agreeable food; provided the

* Clavigero's Hiſt. of Mexico, I. 38.

gland on the back be cut off, and the liquor which it ſecretes, carefully waſhed from the carcaſe at the inſtant of death *.

There are probably ſeveral varieties of this ſpecies, diſtinguiſhed by diverſities of colour and ſize.

The *Cojametl* conſtantly refuſes to copulate with our *European* ſwine.

IV.—*Æthiopian Hog* †.

THIS animal has a longer body and ſhorter legs than our common ſwine. It is near five feet long, and between two and two feet and a half in height. Its body is of a thick, broad form; its noſe almoſt of a corneous conſiſtency, truncated and depreſſed; its mouth narrow, and deſtitute of fore teeth; but furniſhed with uncommonly hard gums to ſupply their functions. The tuſks in the lower jaw are ſmall, in the upper very large. The eyes are ſmall, and ſituated high in the forehead; a horizontal lobe or wattle lying under them, intercepts from the ſight of the animal, all objects placed immediately below. The ſkin is of a duſky hue; the briſtles are thinly diſperſed in ſeparate parcels over the body. Between the ears and on the ſhoulders, they are longer than on any other parts of the body.

Theſe animals inhabit the hotteſt regions of *Africa*; they are diffuſed from *Sierra Leone* to *Congo*, and are alſo found in the adjacent iſland of *Madageſcar* ‡. *Dampier*

* Clavigero's Hiſt. of Mexico, I. 39.

† *Sus Æthiopicus* of the Syſt. Nat.; *Engalla* of ſeveral travellers; *Æthiopian Hog* of Pennant; *Sanglier du Cap du Verd* of de Buffon.

‡ Barbot, in Churchill's Collection, V. 487.

pier ſeems to inform us, that they are found alſo in the iſle of *Mindanao*; for though his account of the hogs of that iſland, does not correſpond in every minute, particular to this ſpecies, yet it correſponds better to them than to any other.

The manners and œconomy of theſe animals, are but imperfectly known. They live chiefly under ground, where the form and texture of their ſnout enables them to make their way as readily as the mole. They are lively, ſwift, fierce, and cunning. At the *Hague*, one of them gave his keeper a fatal wound in the thigh. They diſdain all commerce with the *Chineſe*, or with our *European* domeſtic hog.

V.—*Cape Verd Hog* *.

THIS hog is of a ſuperior ſize, and peculiar to *Africa*. The ſpecies are diffuſed through the tract of country between *Cape Verd* and the *Cape of Good Hope*. The head is long; the noſe ſlender. The tuſks are large, hard as ivory, and in the upper jaw, thick and truncated obliquely. The ears are narrow, erect, and pointed. The tail is ſlender, and terminates in a tuft, reaching down to the higheſt joint of the leg. Each jaw is furniſhed with twelve grinding teeth. The body is covered all over with long, fine briſtles. This ſpecies has been, by ſome naturaliſts, confounded with that immediately preceding. But the form of the head, the ſtructure of the mouth, and the manner in which the body is covered, eſtabliſh a ſufficient diſtinction between them.

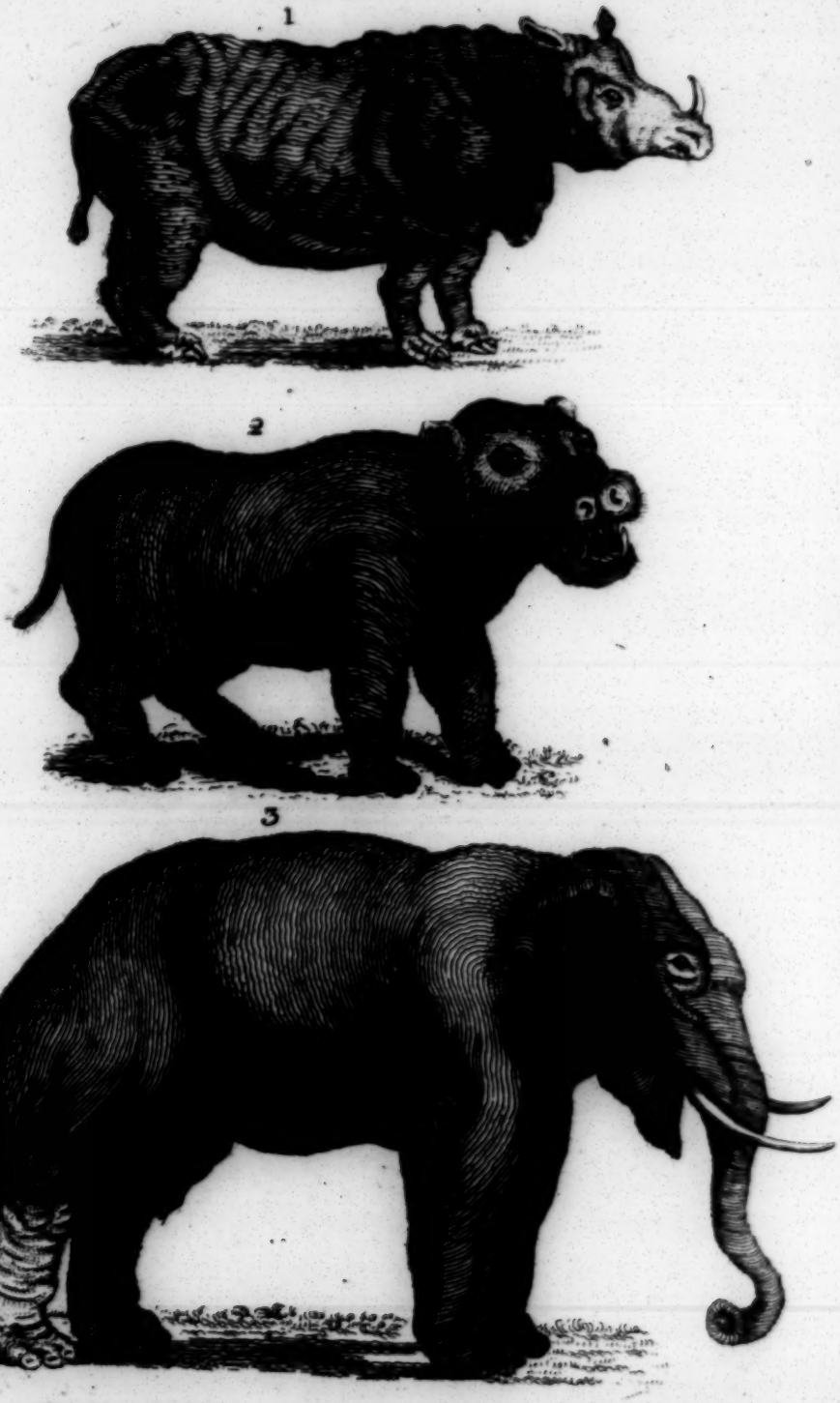
* *Sanglier de Cap Verd* of de Buffon; *Sus Africanus* of the Syſt. Nat.; *Cape Verd Hog* of Pennant.

VI.—*Babyrouſſa.*

THE Babyrouſſa is of a plump, ſquare form, and nearly equal to the ſtag in ſize; but what chiefly diſtinguiſhes it, is the ſize and the ſhape of its tuſks. Each jaw is furniſhed with two. Thoſe in the inferior jaw, riſe eight inches out of their ſockets, towards the eyes. The ſockets of thoſe above are placed on the outſide of the jaw; and the tuſks riſe twelve inches out of them; they bend like horns, till their points nearly touch the forehead. The ears are ſmall, erect and pointed. A few weak briſtles cover the back; the reſt of the body is covered with a ſort of ſoft wool. The tail is long, often twiſted, and terminates in a point.

The Babyrouſſa is found in the iſlands of *Java*, *Celebes*, and *Boero* in the Eaſt. A few individuals are often diffuſed through the other iſlands of the *Indian Ocean*. The ſpecies are naturally gregarious. Their ſenſe of ſmelling is extremely acute. Plants and leaves of trees are their favourite food. They grunt like our common hogs. They are not unſuſceptible of domeſtication. To eſcape from a purſuer, they often ruſh into the ſea, and ſwim to a diſtance, or conceal themſelves by diving. They even ſwim occaſionally from iſle to iſle. A Babyrouſſa is often ſeen to reſt its head in a foreſt, by hooking its upper tuſks on ſome bough. None of theſe animals ever commits any devaſtations in gardens.

Plate XV.



1. RHINOCEROS 2. HIPPOPOTAME 3 ELEPHANT

GENUS XI.—*Rhinoceros.*

ANIMALS of this genus are diſtinguiſhed, ſometimes by one, ſometimes by two large, ſolid, conical horns on the noſe; and by having each hoof cloven into three parts.

I.—*Rhinoceros with one horn; or Unicorn* *.

THIS animal is among the largeſt of quadrupeds. His body equals the bulk of the elephant; and were not his legs ſhorter, he would exhibit a no leſs ſtately figure. A ſingle, black, ſmooth horn, ſometimes three feet and a half long, and ſituated near the extremity of the noſe, conſtitutes his ſpecific character. The upper lip is diſproportionately large; hanging over the lower, and terminating in a point. It is furniſhed with muſcles, which enable the animal to move it with great dexterity in collecting his food, and introducing it into the mouth. The noſtrils are in a tranſverſe direction. The ears are large, erect and pointed. The ſkin is naked, rough, and extremely thick. About the neck it is gathered into enormous folds: A fold extends between the ſhoulders and the fore legs; and another from the hinder part of the back to the thighs. The tail is ſlender, flat at the end, and covered on the ſides with very ſtiff, black hairs. In conſequence of the vaſt bulk of the body, and the diſproportionate

* *Rhinoceros* of Pliny and de Buffon; *Rhinoceros Unicornis* of Linnæus; *Reem* of the Holy Scriptures.

diſproportionate ſhortneſs of the legs, the belly hangs low. The breadth of the feet does not exceed the circumference of the legs.

This animal was well known to the ancients. Several of the ſacred writers make frequent alluſions to the *Reem*, as an animal familiarly known to the people, to whom their writings were directly addreſſed. They have not indeed condeſcended to a minute deſcription; but the terms in which they have mentioned it, ſufficiently indicate the ſpecies. *Pliny* * mentions the rhinoceros, as an animal that appeared in the *Roman* circus, in games exhibited by *Pompey*. He was oppoſed to the elephant, and ſhewed himſelf no unequal antagoniſt. In addition to this information, the *Roman* natural hiſtorian fables, that the elephant and the rhinoceros are natural enemies; and that the latter carefully whets his horn upon ſtones, to tear up the belly of the former. Though not deſcribed by *Ariſtotle*, the rhinoceros is mentioned by the hiſtorians of *Alexander*, as one of the ſtrange animals diſcovered by his army in their progreſs into *India* †.

But from the time when they ceaſed to be exhibited on the *Roman* amphitheatres, till within the ſixteenth century, no animals of this ſpecies appeared in *Europe* It was forgotten that any had ever appeared. Thoſe who were acquainted with what the ancients relate concerning the rhinoceros, concluded, or at leaſt ſuſpected, either that no ſuch ſpecies of animals had ever exiſted; or, that though they might once exiſt, they were now extinct.

In

* Lib. viii. C. 20. † Q. Curtius, Lib. IX. C. 1.

In the ſixteenth century, the exiſtence of the ſpecies was fully aſcertained. A number of individuals have ſince been, at different times, introduced into *Europe*. Many figures have been drawn; and the form of the rhinoceros is no longer ſtrange. His character and manners are alſo tolerably known.

He is a native inhabitant of *Bengal*, *Siam*, *Cochinchina*, *Quangſi* in *China*, and the iſles of *Java* and *Sumatra*. He is a ſolitary, ſtupid animal. Shady foreſts adjoining to rivers, and miry, marſhy plains, are his favourite haunts. Unleſs provoked by injuries, he is commonly mild and innoffenſive. His rage is deſperate and dangerous. The mode in which copulation takes place between the two ſexes, is not certainly known. The female produces only one at a birth. During the firſt month of its age, the young rhinoceros does not riſe above the ſize of a large dog. The horn is at firſt almoſt imperceptible, and increaſes by ſlow gradations. The bulk of the animal is indeed but very ſlowly enlarged. At the age of two years he has ſcarce attained half his full height. His eyes are ſmall, and his ſight dull. But he poſſeſſes the ſenſes both of hearing and ſmelling in high perfection. Thorns and prickly ſhrubs are his chief food. His tongue was once ſaid to be rough and hard; but from later and more accurate obſervation, we learn, that it is as ſmooth and ſoft as the tongue of any other animal. It has been conjectured, that ſixty or ſeventy years may be the natural term of the life of the rhinoceros. His ſkin has been repreſented as impenetrable, even by balls; but we now find that this vaſt animal is liable to be mortally wounded by miſſile weapons of all kinds.

The fleſh is not unlike pork; but of a coarſer grain, and a ſtronger taſte.

II.—*Rhinoceros with two horns* *.

In ſize, form, manners, and almoſt all other characteriſtics, this ſpecies appears nearly allied to the former. The only, or at leaſt the chief diſtinction is an additional horn. The former rhinoceros bears only one horn on his noſe; but this ſpecies are furniſhed with two,—one ſtanding ſtraight behind the other.—We know not whether the unicorn and the bicorn copulate and breed together indifferently. It has even been doubted, whether all animals of the rhinoceros character, may not naturally poſſeſs two horns; and an unicorn appear only in conſequence of an accidental loſs.

The anterior is always larger than the poſterior. Both horns are univerſally of a conical ſhape, with the tips reclining ſomewhat backward †. The poſterior horn of an old rhinoceros has always the appearance of being worn away. *Dr. Sparrman* relates from the information of the *Hottentots* and *Dutch* coloniſts at the *Cape*, that the horns are remarkably looſe on the noſe of the living rhinoceros; he moves them backwards and forwards at pleaſure; as he walks careleſsly, they ſhake and clatter againſt each other; and in digging roots, which he eats, as well as prickly ſhrubs, he reclines the anterior horn, and employing only the poſterior, thus wears the latter by degrees to a ſtump, while the former remains entirely uninjured. The tips of both horns are ſlightly bent backwards. Their texture ſeems compoſed of parallel horny fibres. Near the root, the ſurface of the horn is rough and

* *Rhinoceros Bicornis* of Linnæus. † Sparrman II. 98.

and unequal; towards the point ſmooth and plain like the horns of oxen. The anterior horn of a rhinoceros of moderate ſize ſhot by *Dr. Sparrman*, was a foot in length, and five inches in circumference at the baſe. The anterior horn of a larger rhinoceros was a foot and an half in circumference; and ſeven inches in circumference at the baſe. The poſterior horn ſtands rather on the forehead than on the ſnout.

Diſſecting the ſmaller rhinoceros, *Sparrman* found its ſtomach filled with maſticated roots and branches of trees, and ſucculent plants, ſeveral of which ſeemed to be prickly. It had no fore-teeth; but the lips were of ſo hard a texture, that they might eaſily ſerve to perform all the ſame functions as the fore-teeth of other animals. The jaws of a full grown rhinoceros were furniſhed with four and twenty grinders. The anterior part of the *os palati* exhibits a tooth-like proceſs; but ſo diſtant from the lower jaw, that it can ſcarce ſerve any of the purpoſes of a tooth. The ſkin is hard, and thick in proportion to the bulk of the animal; but not proof againſt the impreſſion even of blunt, pointed weapons. On the feet, the ſkin is thicker, and more callous than on the other parts. The ſkin is not gathered into folds, as that of the former ſpecies. It is ſmooth and fleſh-coloured between the legs: A few ſtiff briſtles are thinly ſcattered over the other parts of the body; they are moſt numerous about the ears and the end of the tail. The ſkin is of a deep cinereous grey colour; and numerous warts appear all over the body. The foot is divided into three parts, the hoofs of which project but a little beyond the leg. Such according to *Dr. Sparrman*,

are the more remarkable external characteriſtics of the rhinoceros with two horns.

Another obſerver of nature aſcribes to this ſpecies a very different appearance, and treats *Sparrman* with great aſperity, for advancing what appears to *him* abſolutely fabulous *. Theſe writers diſagree ſo remarkably, that I ſhould conſider them as deſcribing different ſpecies, or different varieties, did I not ſee reaſon to ſuſpect that wonder or partial obſervation, or a ſpirit of oppoſition, may have contributed to create the differences which appear in their deſcriptions.

Mr. *Bruce* repreſents the rhinoceros of *Abyſſinia*, as having his ſkin gathered into folds, on the neck, the ſhoulders, the buttocks, and ſome other parts of his body. His mouth he deſcribes as furniſhed with twenty eight teeth. The upper lip he allows to be remarkably large. The ſkin is always ſmooth, except when flies and other troubleſome inſects have broken it, ſo as to produce puſtules; a diſtreſs to which the animal is very liable. The tongue of the young rhinoceros is indeed ſmooth; but, as he grows old, it becomes very rough. The anterior horn is round, and bends ſlightly back at the point; behind it appears the ſecond, which is flat and ſtraight; and behind this have been obſerved the rudiments of a third.

It is only in *Africa* that this animal has been diſcovered, in modern times. In the ſouthern parts of the *African* continent, the ſpecies are well known †. The *Europeans* who have penetrated into *Abyſſinia*, repreſent them as not leſs numerous in that country ‡. From an epigram of *Martial*, and ſome coins of *Domitian*, we learn

* Bruce's Travels, Vol. V. p. 85—107. † Sparrman, Paterſon.
‡ Bruce; Lobo, 69.

learn that the rhinoceros with two horns was not unknown to the *Romans*.

The manners and œconomy of this ſpecies differ but little from thoſe of the laſt. But the bicorn has been more accurately obſerved than the unicorn. He reſides almoſt conſtantly in deep foreſts. He never eats hay or graſs. Large ſucculent plants, prickly ſhrubs, the branches, and even the trunks of trees, are the articles of food which he prefers. The ſtrength of his jaws and teeth enables him to break off and maſticate the thickeſt branches of the hardeſt and tougheſt trees. But the foreſts of *Abyſſinia* afford trees of a ſofter conſiſtency, and peculiarly ſucculent; which he eats in preference to others. His upper lip is his chief inſtrument in collecting his food. He extends and twiſts it, ſo as to perform with it many of the functions which the elephant performs with his proboſcis After ſtripping a tree of its branches, a rhinoceros often applies his horn to the trunk, and ſplitting it into ſo many lathes, devours it with as much eaſe and avidity, as an ox would eat up a bunch of celery. In the foreſts inhabited by animals of this ſpecies, there appear ſometimes trees diveſted of their leaves and branches,—ſometimes a trunk divided into lathes, a part of which have been eaten, and another part left for a future repaſt,—and ſometimes ſhort ſtumps, of which the leaves, branches, and trunks have been devoured. The horns of the rhinoceros ſuffer greatly in the preparation of his food; he often leaves a part of a horn either fixed in a tree, which he has in vain attempted to tear, or lying beſide it on the ground. The ſenſibility of the rhinoceros in this part, muſt render ſuch an accident as the breaking of a horn, if not fatal, at leaſt extremely painful

ful and dangerous. Mr. *Bruce* relates *, that he ſaw a rhinoceros ſo affected, on having the point of his foremoſt horn broken off by a muſket ball, as to appear, for an inſtant, abſolutely incapable of ſenſe and motion.

However unwieldy his form, the rhinoceros diſplays aſtoniſhing ſwiftneſs. He moves with a ſort of trot; quickening his pace by degrees, as he runs. His ſpeed is not equal to that of a ſwift and vigorous horſe; but, between ſpeed and cunning, he ſeldom ſuffers a hunter, mounted on horſe-back, to overtake him. The *Hottentot* and *Caffrarian* hunters are accuſtomed to ſteal upon the rhinoceros when aſleep, and gore him with ſeveral deep wounds. After which, they follow his footſteps, even for ſeveral days, till he drops down of weakneſs, or dies of his wounds. But they commonly poiſon their darts immediately before the enterprize: And in this caſe, the animal does not long ſurvive †. As he moves through the foreſt, the trees are cruſhed under his weight, like ſo many dry reeds. His eyes are ſo ſmall, and his ſight ſo feeble, that he ſees only a very ſhort way before him. The *Abyſſinians* purſue him, two on a horſe; and, as he ſeldom looks behind him, commonly overtake him before he is aware. The one, armed with a ſword, then drops down; and cutting the hams of the rhinoceros, the vaſt animal falls to the ground, alike incapable of flight and of reſiſtance. Although naturally peaceable, he is diſpoſed as well as other animals, to defend himſelf when attacked. His rage is impetuous, and generally ill directed; he injures himſelf as readily as an antagoniſt; he knocks his head againſt a wall or manger,

* Travels, V. 93. † Sparrman, II.

manger; ſtrikes againſt a tree with as much ſatisfaction as againſt the hunter who attacks him.

It may be naturally conceived, that ſo large an animal as the rhinoceros muſt require a conſiderable quantity of water to macerate his food. The tracts of country which he inhabits, are interſperſed with marſhes, lakes and rivers. The diſtrict of the *Shangalla*, the favourite abode of this ſpecies, in *Abyſſinia*, is, for ſix months in the year, deluged by conſtant rains, and overſpread with woods which prevent evaporation. The rhinoceros, as well as moſt other ſpecies, is peſtered by flies. Being deſtitute of hair, he is peculiarly expoſed to the perſecution of theſe inſects. Nature has taught him, however, to roll occaſionally in the mire, till he acquire a cruſt of dirt, which may for a time at leaſt, protect him from their ſtings. But this dries, cracks, and falls off in pieces. The flies then renew their attacks, and often pierce his ſkin; ſo that his body is at length covered over with puſtules. It is in the night chiefly, that he rolls in the mire; and the hunters often ſteal on him at that period, while he is enjoying one of his favourite pleaſures, and ſtab him with mortal wounds in the belly, before he is aware of their approach. By wallowing in the mire, he often gathers reptiles and inſects upon his body; ſuch as millepedes, ſcolopendræ, worms and ſnails *.

The rhinoceros, though next in ſize, yet in docility and ingenuity, greatly inferior to the elephant, has never yet been tamed, ſo as to aſſiſt the labours of mankind, or to appear in the ranks of war. The *Romans* introduced him on the amphitheatre, and oppoſed him to the elephant;

* Bruce's Travels, V. 101.

elephant: It is even pretended, that he appeared no unequal match. The bear was a contemptible antagoniſt to the rhinoceros. The fleſh of this animal, though by no means a delicate diſh, is with the *Shangalla*, and a great part of the inhabitants of Lower *Abyſſinia*, a principal article of food. The ſoles of his feet, conſiſting of a griſtly ſubſtance, ſoft like the ſoles of a camel, are the moſt delicate part. The reſt of the fleſh is ſaid to taſte like pork; but is much coarſer, and ſmells of muſk. The negroe hunters of *Abyſſinia* eat it without ſalt. The hairs about the tail are ſo thick and ſtrong, that with ten of them a whip may be made, which will draw blood at every ſtroke. The ſkin cut into thongs forms excellent whips. The horns are made into cups, which have been fancied to act as antidotes againſt poiſons. In *Abyſſinia*, the handles of daggers are always made of the horn of the rhinoceros. The ſecond horn is ſcarce ever applied to any uſe. The ſurface is ſuſceptible of a perfect poliſh; and beautiful ſnuff-boxes might be formed of this material, were it not that it is a ſubſtance eaſily ſcratched, and extremely liable to crack or ſplinter.

GENUS XII.—*Hippopotamus* *.

THIS genus conſiſts only of one ſolitary ſpecies. Even the rhinoceros yields to the hippopotamus in ſize. He is ſometimes not leſs than ſeventeen feet long, and generally about ſeven feet in height. His head is of an enormous ſize; his mouth amazingly wide; the jaws are armed, each with four cutting teeth, and two tuſks. The teeth in the lower jaw are ſtraight, and point forwards; the two middlemoſt longer than thoſe on the ſides; thoſe in the upper jaw are diſpoſed at regular diſtances from each other. The tuſks in the upper jaw are ſhort; thoſe in the lower very long, and truncated obliquely. A tooth is ſometimes twenty-ſeven inches long, and weighs ſix pounds, nine ounces. In figure, the hippopotamus reſembles an ox more nearly than any other common animal. His eyes and noſtrils are diſproportionately ſmall. His ears are ſmall, pointed, and covered within with a thick lining of ſhort, fine hairs. A few ſlender tufts of hair are ſcattered over the lips. The body is thinly covered with whitiſh hair, at firſt ſight ſcarce diſcernible. On the neck the hair is thicker than on the reſt of the body, but not ſo thick as to form a mane. The tail is almoſt bare, and about a foot in length. The legs are ſhort and thick; the hoofs divided into four ſeparate parts. Though an amphibious animal, the hippopotamus has no membranes connecting the diviſions of his hoofs.

Africa

* Ποταμιος ἱππος of Ariſtotle; *Hippopotamus* of Pliny and moſt other natural hiſtorians; *Hippopotame* of Pennant; *Hippopotami, River-Horſes* and *Water-Elephants* of *Barbot* in his deſcription of *Guinea*.

Africa ſeems to be the only diviſion of the globe inhabited by this ſpecies. The *Nile*, the *Niger*, the *Gambia*, the *Zaira*, are the chief rivers in which they have been diſcovered. But they are obſerved through all the other conſiderable rivers, and the lakes of the *African* continent. From the information of the *Jeſuits* *, and of a later and more accurate obſerver † we learn, that they abound in all the lakes and rivers of *Abyſſinia*, *Nubia* and Upper *Egypt*. Cultivation has expelled them from Lower *Egypt*. *Sparrman* repreſents them as not leſs numerous in the Southern parts of *Africa*. It had been imagined, that hippopotami never ventured into the ocean, and ſcarce ever deſcended ſo low as to the mouths of rivers; but this philoſophical traveller relates ‡, that he actually obſerved ſeveral hippopotami in ſalt water, at the mouths of the rivers *Kromme* and *Camtour*; and in the diſtrict of *Krakekama*, ſaw on the ſea-beach, evident traces of one of theſe animals that had come out of the ſea, but inſtantly retired back: He was alſo informed by a Captain Burtz, that on the Eaſtern coaſt of *Africa*, he had often ſeen hippopotami raiſe their heads above the ſurface of the ſea, to breathe and neigh. In *Guinea*, the rivers, lakes and marſhy grounds, afford numbers of hippopotami §. Dr. *Sparrman* was informed by a party of *Caffrarians*, that about *Konap-rivier* in *Caffraria*, hippopotami appeared on land in bodies as numerous as the pebbles on the bed of the river; a compariſon which the Doctor, with great judgment, underſtands as hyperbolical.

To

* Lobo, p. 116, &c. † Bruce, V. 85. ‡ Travels, II. 285.
§ Barbot in Churchill's Coll. V. 73. 113.

To the ancient *Greeks* and *Romans*, this animal was known only as a native of the *Nile*. Their ideas of its form and manners were indiſtinct and inaccurate. *Ariſtotle* and *Pliny* deſcribe it as hoofed like an ox; adorned with the mane of a horſe: with a flat noſe, and a tail like that of a boar; with teeth alſo like thoſe of a boar, but leſs fit for miſchief; its back reſembling the back of a horſe *. Although the hippopotamus had appeared in the *Roman* circus, *Pliny* ſeems merely to copy the imperfect deſcription of *Ariſtotle*. But the ancients knew no other arts of deſcription, ſave the comparing of the parts of the unknown animal with thoſe of ſuch animals as were commonly known; and many of their errors ſeem to ariſe from this cauſe. A ſtrange animal was often to be compared not to a known animal which it perfectly reſembled, but to that known animal to which it was the leaſt unlike.—The *Behemoth* of *Job* is underſtood to have been no other but the hippopotamus; his ſtrength, his ſize, and his manners, are beautifully alluded to by that ſublime writer.

The manners of this ſpecies are pretty well known. Their awful ſize has attracted attention. They are ſaid to be polygamous, and the females much more numerous than the males. It is aſſerted that they copulate in the ſame manner as common cattle. The female brings forth her young on land, but ſuckles it under water. The calf is but of a very moderate ſize for ſome time after birth. One caught by Dr. *Sparrman*, which was ſuppoſed to be about a fortnight, or three weeks old, meaſured three feet and a half in length, and two feet in height. It is ſuckled by the mother, and remains for a

* Ariſt. de Anim. II, 7 and 13. Plin. Nat. Hiſt. VIII. 25.

while under her protection; how long we know not. When caught, this calf uttered a ſqueaking noiſe, like a ſcared or wounded hog. The voice of the adult animal is a neighing ſound, which ſome deſcribe as having a perfect reſemblance to the neighing of a horſe; while others repreſent it as a loud ſonorous noiſe, between the bellowing of an ox, and the roaring of an elephant.

Although an inhabitant of the waters, the hippopotamus is well known to breathe air like land animals. On land he finds the chief part of his food. He may perhaps occaſionally feed on aquatic plants; but he very often leaves the waters, and commits wide devaſtations through all the adjacent cultivated fields. On the banks of the *Nile*, he often defeats the hopes of the huſbandman; even a large field of corn or clover is ſoon entirely deſpoiled of verdure by his capacious jaws. In the South of *Africa*, he commits ſimilar ravages. Not only graſs, but boughs and roots of trees, and ſhrubs are articles of his ordinary food. In cultivated tracts, it is commonly in the night that the hippopotamus leaves his retreats in the rivers, and wanders into the fields. He deſcends to the bottom of the deepeſt river, and walks along it with the ſame ſlow, ſtately pace, as if on land, and breathing the open air. But he cannot continue under water beyond a certain length of time. He muſt aſcend at intervals to the ſurface to diſcharge the contents of his lungs, and draw in freſh air. He appears at times in the ſea, and is ſeen going out with the tide; but it appears probable, that ſea-water does not ſerve him to drink; for *Sparrman* relates, that a hippopotamus, who, having been diſturbed in the rivers, had taken refuge in the ſea, was obſerved to come every night on ſhore

ſhore to drink water out of a neighbouring well, till he was at laſt ſhot. It has been pretended, that the hippopotamus devours great quantities of fiſh; but it appears with the fulleſt evidence, both from the relations of many travellers, and from the ſtructure of the ſtomach in ſpecimens which have been diſſected, that he is nouriſhed ſolely, or almoſt ſolely, on vegetable food. He walks with a tardy pace; and is capable of ſo little agility, that even a hillock or wall of a very moderate height, preſents to him an inſurmountable barrier. Unleſs when accidentally provoked or wounded, he is never offenſive. But, when his fury is provoked, revenge is eaſily in his power. With his teeth he eaſily breaks a boat in pieces; or where the river is not too deep, he will raiſe it on his back, and overſet it.

The *Egyptians* practiſe a very artful contrivance for deſtroying this animal. On ſome place where they expect an hippopotamus to paſs, they throw a large quantity of peas; theſe the hungry animal eagerly devours as ſoon as he perceives them; ſuch a quantity of dry food ſoon diſpoſes him to drink; and the water ſwelling the peas in his belly, burſts the veſſels, and he falls dead on the ſhore *. The *Hottentots* ſometimes practiſe the ſame ſtratagem. But they more commonly either intercept the animal in pits dug in places through which he has been obſerved to paſs, or ſhoot him with tin-balls †.

Pliny relates, that this animal, when he feels his habit overcharged, repairs to ſome place covered with ſharp reeds, and obtains a diſcharge of blood, by lying down upon them in ſuch a poſture, that they pierce the ten-

* Haſſelquiſt, p. 188. † Sparrman, II. 286.

dereſt parts of his ſkin. This is not a very probable tale. He indeed retires to ſleep on iſlands overgrown with reeds; and it may ſometimes happen, that notwithſtanding the enormous thickneſs of his ſkin, it may be torn in the tendereſt parts. The body of the hippopotamus is ſaid to be infeſted with a peculiar kind of vermin. On a calf which *Sparrman* caught, he found only a ſpecies of leech which reſided about the *anus*, and of which ſome had even penetrated a good way up the *rectum*. Theſe he thinks, might be beneficial, by abſtracting any exceſs of blood generated in ſo vaſt a body.

The hippopotamus is not merely harmleſs. He affords many articles of conſiderable utility to human life. His fleſh is a wholeſome and not unpleaſant food. The *Hottentots*, the *Caffrarians*, and even the *Dutch* coloniſts at the *Cape*, eat it with great eagerneſs. In *Egypt* likewiſe this animal has been ſought for his fleſh. Dr. *Pocock* ſaw it ſold in the market. The negroes of *Angola*, *Congo*, and of the whole Weſt coaſt of *Africa* in general, though they venerate this mighty inhabitant of the rivers as a deity, yet ſcruple not to eat him. The fleſh is ſaid to be tender. The fat is not ſo rancid and greaſy as that of moſt other animals. The gelatinous part of the feet, when well dreſſed, is a great delicacy. The dried tongue of an hippopotamus is conſidered, even at the *Cape* of *Good Hope*, as a rare and ſavoury diſh. Dr. *Sparrman*, on his return to *Europe*, furniſhed the King of *Sweden*'s table with one of theſe tongues, two feet eight inches in length. The teeth of the hippopotamus are of a harder and whiter ſubſtance than thoſe of the elephant. Dentiſts prefer them on account of theſe qualities

lities, even to ivory, for the purpoſe of replacing loſt teeth in the human jaw. The hide is rather thicker than that of the rhinoceros. It is a ſufficient load for a camel. The inhabitants at the *Cape* make excellent whips of it, which, after being uſed for ſome time, become more pliable than thoſe made of the hide of the rhinoceros. The blood of this animal is ſaid to be uſed by the *Indian* painters as one of their colours.

Some relate, that the hippopotamus is conſtantly at war with the crocodile, and more than a match for him. Were it not for the hippopotamus, *Haſſelquiſt* tells us *, the crocodiles would ſoon become ſo numerous in the *Nile*, as utterly to depopulate *Egypt*. But others pretend that theſe two animals are ſeen ſwimming peaceably together, without the leaſt appearance of any hoſtile diſpoſitions towards one another.

Belon ſpeaks of a tame hippopotamus as an animal of a very mild and gentle character: And *Sparrman* is of opinion, that a calf of this ſpecies might be brought up tame, without much difficulty; and that thus the curioſity of *Europeans* might once more be gratified with a ſight of living ſpecimens, as were the *Romans* at the games of *Scaurus*.

A Dutch coloniſt, *Sparrman* tells, fancied he had found the *os petroſum* of the hippopotamus reduced to powder, and taken in ſmall quantities, an excellent remedy in caſes of convulſion, particularly in children.

* Travels, p. 187.

GENUS XIII.—*Tapiir* *,

DISTINGUISHED as a peculiar genus by having its hoofs, both before and behind, divided into three parts, with a ſort of falſe hoof on the hinder part of each fore-foot.

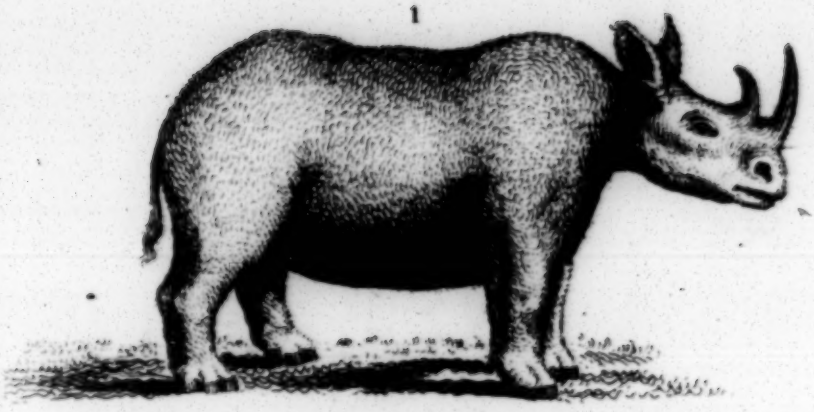
The tapiir is a ſolitary ſpecies. We are acquainted with no other animal referable to the ſame genus. He is ſhaped like a hog, and of the ſize of a heifer half a-year old. When young, his body is ſpeckled with white: after he is full grown, it changes to a duſky colour. The noſe bears ſome reſemblance to the proboſcis of an elephant; extending far beyond the lower jaw, and being ſuſceptible of contraction or dilatation at the pleaſure of the animal: its ſides are furrowed in a ſingular manner. Only the male, however, is armed with this proboſcis; the ſnout of the female is not prominent, nor her upper jaw prolonged beyond the lower. The extremities of both jaws are pointed; each contains ten cutting teeth, and as many grinders. The ears are erect, oval, and bordered with white. The eyes are ſmall; the back arched; the legs ſhort; the tail bare, and of a very diminutive ſize. The hair over the body is ſhort. A briſtly mane, the hair of which is an inch and a half in length, runs along the neck.

South

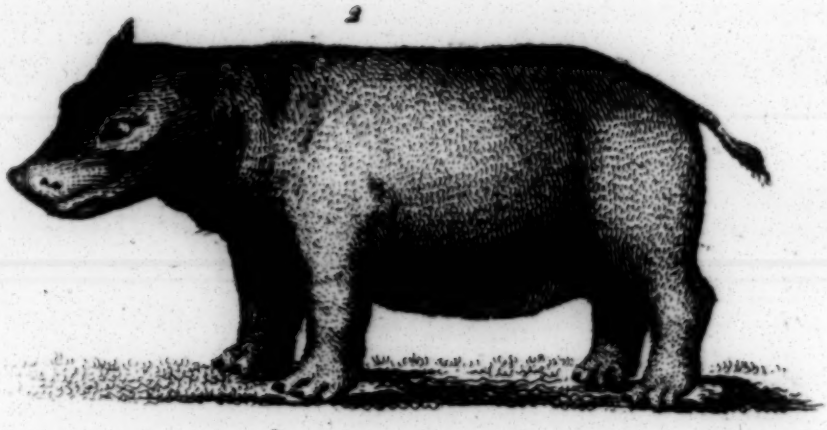
* *Tapir* of Buffon, Linnæus, and ſome other natural hiſtorians; elephant hog, mountain cow, and ſpecies of hippopotamus, of different voyagers; *Danta*, *Anta* and *Beori* of the *Mexicans*.

Plate XVI.

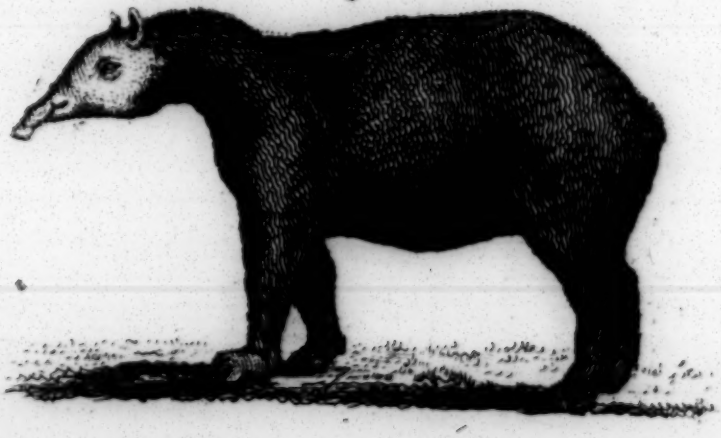
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3



1. BICORN D RHINOCEROS 2. CALF OF THE SEA COW 3. TAPIR

South America is the native country of the tapiir. He inhabits along the *Eaſtern* ſide of the *Dutch*, *Portugueze*, and *Spaniſh* dominions in that part of *America*. He is one of the largeſt quadrupeds of the new world. Marſhes, and ſolitary woods, bordering on ſome lake or river, are his favourite retreats *. In the heat of the day he conceals himſelf in the gloom of the foreſt, or under water; for like the hippopotamus, he is, in ſome meaſure, amphibious, ſwims well, or dives and walks at his eaſe on the bottom. If rouſed from the foreſt, he retreats for ſecurity to the water. At night he wanders abroad in ſearch of food. He lives on graſs, ſugar-canes, and fruits. His voice is hiſſing: he is a ſalacious, ſlow, and ſluggiſh animal. He is an object of purſuit to the *Indian* hunters. His ſkin often reſiſts an arrow or muſket ball; and when haraſſed by dogs, he forgets his natural mildneſs, turns upon them, and often tears their ſkin or mutilates their limbs. Yet his ſkin is ſometimes penetrated by the poiſoned arrows of the *Indians*; and numbers of dogs will overpower him, although a part fall in the attack.

He is not unſuſceptible of domeſtication. In *Guiana*, the tapiir is ſometimes introduced into the farm-yard. When gently treated, he, like other naturally mild animals, contracts great familiarity with man, diſtinguiſhes his maſter, diſcovers affection to the hand that feeds him, and learns ſo much roguery as to ſlip his noſe into the pockets of people who approach him, in ſearch of food.

The thickneſs, and the cloſe texture of his ſkin, render it an article of conſiderable value. His fleſh is

* Clavigero's Mexico. I. 42.

is eaten by the native *Americans*, but not a very delicate ſpecies of food. The legs, if roaſted for four and twenty hours, become not diſagreeable even to the palate of an *European* †. The *Indians* uſe the ſkin chiefly for bucklers.

* Oviedo, quoted by Clavigero, l. 41.

GENUS XIV.—*Elephant.*

THE elephant is well known as the largeſt of quadrupeds. An elephant's body has been ſometimes found to weigh four thouſand and five hundred pounds. The height of a full grown elephant is from nine to fifteen feet.

The trunk is a remarkable organ, almoſt peculiar to the elephant; although, indeed, the long, dependent, and flexible ſnout of the tapiir bears ſome reſemblance to it. It is a cartilaginous ſubſtance, compoſed of numerous rings, terminating in a ſmall moveable hook, and having the noſtrils in its extremity. The elephant can, at pleaſure, contract, and dilate, and bend it in any direction.

His tuſks alſo diſtinguiſh the elephant in a ſingular manner. Neither jaw is furniſhed with fore-teeth. Each has four large flat grinders. But, in the upper are two enormous tuſks, of a ſolid, white, and fine grained ſubſtance, which, as they proceed from the gums in which they are rooted, firſt point forwards, and then bend ſlightly upwards. Theſe are often ſeven feet long, and frequently weigh an hundred and fifty-two pounds.

It is not eaſy to convey in words a diſtinct idea of the form of any animal. Words may aſſiſt the imagination to recal a form with which it is already familiar; but ſcarce any clearneſs or vigour of verbal deſcription will give the mind a ſtrong and diſtinct impreſſion of an image entirely new to it. In attempting to deſcribe the elephant, this difficulty is felt. His eyes are ſmall; his

ears are long, broad, and pendulous; his neck is ſhort; his back conſiderably arched; his legs thick, clumſy, and ſhapeleſs; his feet undivided, but having their margins terminated by five round hoofs; his tail ſimilar to the tail of a hog, and fringed at the extremity with a few long hairs of the thickneſs of a pack-thread. The female has two ſmall teats, placed a little behind the fore-legs. The body is bare.

The manners of this animal are naturally mild and inoffenſive. He is nouriſhed on vegetable food; fruits, leaves, branches, and even young trees, corn, and other grains, which he devours in large quantities. Contradictory accounts have been alleged of the mode in which the act of copulation is performed among this ſpecies. It ſeems now to be agreed, that they copulate in the ſame manner as the generality of other quadrupeds. In their natural ſtate, elephants aſſociate in herds; but the impulſe of love ſeparates them into pairs, who retire, each to ſome ſecret ſequeſtered ſpot, to gratify the genial paſſion. Mankind are never ſuffered to witneſs thoſe rites; and the preciſe period of geſtation with the female elephant is not certainly known; yet it is ſuppoſed to be about nine months, from the circumſtance of ſome tame ones producing, after an interval of that length, from their wandering into the woods in ſearch of the males. The young elephant has been ſaid to ſuck with its trunk. The ancients pretended, that it ſucked with its mouth. The moderns contradicted them; but *D'Obſonville** has incontrovertibly vindicated the veracity of the ancients. In a herd of old and young elephants, the young have been obſerved to ſuck any of the females

* Philoſophic Eſſays on the manners of various foreign animals, p. 145.

males indiſcriminately. The elephant grows ſlowly, and is ſuppoſed to live to a great age. The ordinary term of his life is at leaſt between one and two hundred years. With his trunk this animal utters occaſionally a ſound like that of a trumpet. When enraged or alarmed, his voice, which ſeems to proceed from his throat and mouth, is a wild ſhrill note, which pierces the human heart with unſpeakable terror.

Plains, foreſts, and gently riſing hills, are the favourite abodes of the elephant. He is a native of *Aſia* and *Africa*. He cannot bear the heat of the torrid regions under the line; but is ſtill more impatient of cold. All the elephants imported into *Europe*, however liberally fed, and carefully managed, have periſhed by a premature death. At *Peterſburgh*, though clothed and kept in houſes warmed by ſtoves, they could not bear the ſeverity of the climate. The ſpecies are diffuſed over the whole continents of *Aſia* and *Africa*, except where intenſe heat, or extreme cold, or uniform cultivation, and the hoſtilities of mankind, keep them at a diſtance. They are alſo natives of the greateſt part of the *Aſiatic* iſles.

Ceylon is famed for its elephants. Some of the *Dutch* have obſerved the manners of the wild elephants in that iſland with ſingular attention. They live in ſmall troops, or diſtinct families. The old ones often ſtand while they ſleep. In wandering from place to place, the males, who are armed with the largeſt tuſks, put themſelves at the head of the troops. Theſe are the firſt to face every difficulty. In ſwimming over any large river, theſe lead the van, and ſeek out a landing place; next follow the young elephants that have not yet attained their full growth, clinging together by the trunks; the reſt of the full grown bring up the rear. A ſolitary ele-

phant, who ſeems to have been expelled from the herd to which he belonged, is ſometimes met with in the woods. Such a vagabond is uncommonly fierce and dangerous. The enormous bulk of the elephant renders his air grave and ſtupid, and all his motions ſlow. A nimble *Indian* will outrun the ſwifteſt. To avoid danger, or attack an enemy, an elephant lengthens and quickens his ſtep, ſo as to keep up with a horſe at a briſk gallop, but not at full ſpeed.

Elephants have in all ages been eagerly hunted. Some of the arts which have been uſed in order to kill or take them alive, are ſingular. Mankind could not employ any other animal to hunt down the elephant. The *Hottentots*, in the diſtrict of *Litſicamma*, near the *Cape*, ſhoot him with tin balls. The chace is attended with conſiderable danger. To irritate an elephant in the woods, or any where but in the open plains, would be almoſt certain death. With every precaution, the ſagacity of the elephant is ſometimes more than a match for the cunning of the hunter. His delicacy of ſmell enables him to diſcover the approch of an enemy before he can poſſibly ſee him. And, when diſcovered, the hunter, unleſs he can, by an inſtant ſhot, lame or wound him mortally, will ſcarce eſcape being trampled, or beat, or toſſed to pieces. Even though he may eſcape, he will ſcarce fail to be plentifully ſouſed with cold water from the elephant's trunk *.

In the iſland of *Sumatra*, where the herds of wild elephants prove extremely troubleſome; wandering over the cultivated grounds, and partly by the impreſſion of their feet, partly by devouring the plantanes and ſugar canes, obliterating all traces of cultivation; the inhabitants

* Sparrman, I. 324.

bitants often ſplit and impregnate a part of their canes with poiſon; and of theſe the elephant eating unwarily, dies *.

The *Ceyloneſe* ſometimes ſurround, in numerous bands, the woods which the elephants inhabit, and with flaming torches, the diſcharge of guns, and other noiſes, drive the animals before them into a park previouſly prepared, and incloſed with ſtrong palliſades. Sometimes perſons, eminent for activity and courage, will ſingle out an elephant in the woods, purſue him till they can fling a fort of ſpringe made of cord round his hinder legs, and winding and faſtening the other end of this round a tree, bring two tame elephants, between whom he is conducted home to captivity, and who, if he prove refractory by the way, are directed to beat him with their trunks. Tame females are alſo led out, at times, to inveigle wild males. As ſoon as one of theſe females has enticed a male from the ſavage herd, a part of her conductors ſeize her captive, while the reſt make a noiſe to frighten away his companions †.

Mankind have, in all ages, been at great pains in taming elephants. When *Alexander* penetrated into *India*, the natives oppoſed him upon tame elephants, whom they had trained to military diſcipline ‡. The *Greeks*, who at firſt beheld them with terror, after triumphing over the nations of the eaſt, introduced them into their own armies. Either a part of thoſe very elephants, which *Alexander* brought from *India*, or others brought ſoon after into *Greece*, were carried by *Pyrrhus* into

* Marſden's Sumatra, 140.

† Pennant's Hiſtory of Quadrupeds, I. 153, 154.

‡ Curtius, lib. viii. cap. 12, 13, 14.

into *Italy*, when he went to oppoſe the *Romans* *. His elephants, with the *Macedonian* tactics, rendered him, at firſt, no unequal match to the warriors of *Rome*. But *Roman* diſcipline, and *Roman* magnanimity ſoon triumphed over his military ſkill, and his gigantic cavalry. Elephants were often after that exhibited at *Rome*. The *Carthaginians*, as well as *Pyrrhus*, found them but weak aids againſt *Roman* valour. In the circus they were at firſt driven about, and ſlain with darts. They were afterwards oppoſed to bulls, and to the rhinoceros. *Pliny* relates that a number of elephants, exhibited in the circus by *Pompey*, when they found themſelves deſtined to immediate death, made a vigorous, but ineffectual effort to break through the iron railing in which they were incloſed: Fruſtrated in the attempt, they, with a wailing voice, and in a ſuppliant poſture, ſeemed to implore the compaſſion of the ſpectators; and ſo impulſively were the whole people affected with the diſtreſs and the ſenſibility of thoſe majeſtic animals, that they with one aſſent aroſe, and in tears imprecated deſtruction on the head of the magnificent general who entertained them with that ſplendid ſpectacle; imprecations, ſays the hiſtorian, which ſoon after took effect.

The ſucceſſors of *Alexander* appear to have long continued the uſe of elephants in their armies. One of the brave *Jewiſh* brothers, the *Maccabees*, terminated his life in a glorious manner, by piercing the belly of an elephant, in the army of one of thoſe monarchs fighting againſt

* M. de *Buffon* and Mr. *Pennant* are of opinion, that the elephants which *Pyrrhus* carried againſt the *Romans* muſt have been a part of thoſe which *Alexander* brought from *India*. This was not neceſſary. The intercourſe between *Greece* and *India* was ſtill open. Elephants, as well as ivory, had probably become an article of commerce.

againſt *his* countrymen, with a deadly wound, and ſuffering himſelf to be cruſhed to death under the falling maſs. Elephants trained to war among the *Greeks*, had turrets raiſed on their backs, from which troops of armed men annoyed the enemy; while a perſon ſitting on the neck, directed the motions of the elephant, and animated him to fight with his trunk. But when ſcared or wounded, they diſdained all government, and ſpread confuſion, not leſs readily among their friends, than through the adverſe army.

The *Eaſt* is the great theatre on which the ſtrength, the ingenuity, and the generous qualities of this ſpecies have been chiefly diſplayed. The *Indian* princes eſtimate their power and grandeur by the number of their elephants. Many of the *Indians* are perſuaded that ſo majeſtic a body muſt be animated by the ſoul of a departed king or hero. In *Siam*, *Pegu*, *Laos*, white elephants are viewed with peculiar veneration, as the living *manes* of deceaſed emperors. Each has a palace, domeſtics, golden veſſels, choice food, ſplendid robes. They are ſubjected to no ſervile labours, and are taught to bow the knee to the reigning emperor, but before none elſe.

A tame elephant is perhaps the moſt docile, gentle, and obedient of all animals. He forms an attachment to his keeper; comprehends ſigns; learns to diſtinguiſh the various tones of the human voice, as expreſſive of anger, approbation or command; is even capable of being taught to underſtand the import of articulate language; adopts, in many inſtances, the manners and the ſentiments of mankind; diſcovers a ſenſe of probity and honour, and expects to be honeſtly dealt with; is generous, grateful, patient, magnanimous, and humane. Like mankind, the

the elephant is fond of gorgeous trappings, and gay attire. But, in a ſtate of ſervitude, though at times infuriated by the impulſe of the genial paſſion, elephants conſtantly refuſe to copulate.

Hiſtorians and travellers relate many tales concerning the prudence, penetrating ſagacity, and obliging temper of the elephant, which can ſcarce appear credible. The ancients have aſcribed to this ſpecies ſentiments of religion, and the tendereſt emotions of ſocial affection. They practiſe, ſay ſome ancient naturaliſts, rites of ablution with religious ſolemnity; they venerate the ſun and moon, and the other powers of heaven; they are endowed with a ſpirit of divination, and their foreſight penetrates through the miſts which veil futurity: his fellows gather around a dying elephant, cheer his laſt moments with friendly ſympathy and kind offices, bedew his corpſe with their tears, and depoſite it decently in the grave. A modern traveller relates a no leſs wonderful ſtory *; that when a wild elephant is taken, and his feet tied, the hunters accoſt him, make apologies for binding him, and promiſe him the faireſt uſage; upon which the elephant becomes perfectly ſatisfied with his change of condition, and follows his new maſters quietly home. Did this ſtory aſcribe to the elephant no more than human ſagacity, and human placidity of temper, I ſhould not preſume to queſtion its truth. But it ſuppoſes him endowed with an intuitive knowledge of human languages, and, at the ſame time, attributes

* Pere Vincent Marie, Voyages de la Compagnie des Indes de Hollande, T. i. p. 413, quoted by Buffon, vi. 79.; and by Smellie, in his Philoſophy of Natural Hiſtory, 449.

butes to him a degree of ſimple credulity inconſiſtent with his penetration, and a tameneſs of ſpirit derogatory from his dignity of mind.

But many more plauſible anecdotes are told of him. When he wiſhes merely to terrify any perſon, he runs upon him with an aſpect of fury, but ſtops when near, without inflicting any injury. He lades a boat in a river with amazing dexterity, carefully keeping all the articles dry, and diſpoſing them, ſo that their arrangement needs not to be changed. In raiſing wheeled carriages, heavily loaded, up a declivity, he puſhes the carriage forward with his front, advances, ſupports it with his knee, and renews his effort. If dragging a beam of wood along the ground, he removes obſtacles, to make it run ſmoothly and eaſily.

The majeſtic elephant on which *Porus* rode in the battle in which he oppoſed *Alexander*, diſplayed a ſtrong attachment to his maſter. When the *Indian* monarch, though exhauſted with fatigue, and covered with wounds, obſtinately refuſed to retire or yield himſelf a priſoner, and the *Grecian* ſoldiers preſſed hard upon him, his elephant ſtill obeyed his direction, though all his companions had fled,—ſtill defended his maſter, and attacked thoſe who approached againſt him, with firm and ardent courage.

Some eaſtern monarchs employ elephants to execute thoſe criminals whom they have condemned to death. They execute the ſentence with great dexterity, ſeize the unhappy victims, toſs them in the air, and then trample them to death.

M. D'Obſonville relates an anecdote of an elephant which repreſents him in a very amiable light. In the *Laknaor*, the capital of *Soubah*, during the rage of an

epidemic diſtemper, the principal road to the palace gate was covered with ſick and dying wretches, extended on the ground, and incapable of removing, at a time when the Nabob was to paſs on his elephant. The indifference of the prince about the lives of his periſhing ſubjects, the haſte with which he was to paſs, and the awkward motions and heavy ſteps of the elephant, ſeemed to threaten inevitable death to a number of thoſe unhappy wretches. But the generous quadruped, without receiving any command to the purpoſe, and even without ſlackening his pace, very dexterouſly aſſiſted the poor creatures with his trunk, removing ſome, raiſing others, and ſtepping over the reſt; ſo that none ſuffered the ſlighteſt injury. In what is an animal, capable of ſuch prudence, ſuch dexterity, and ſuch gentle humanity, inferior to man? In this action, both intelligence and virtue conſpicuouſly appear.

Elephants are more influenced by a regard to the conſequences of their actions than almoſt any other domeſticated animals. On the promiſe of a reward, they are often induced to extraordinary exertions of ingenuity and ſtrength. The ſame curious obſerver of the œconomy of animals *, relates, that he has ſeen two elephants employed in concert in beating down a wall; who, encouraged by their cornacks with a promiſe of fruits and brandy, doubled up their trunks to ſave them from injury, combined their efforts, thruſt with repeated ſhocks againſt the ſtrongeſt part of the wall, carefully marked the ſucceſs of their exertions, and at laſt, with one grand impulſe, levelled the fabric, retiring haſtily to avoid ſuffering from its falling fragments.

A ſtill

* D'Obſonville.

A ſtill more ſingular fact is related by *D'Obſonville*. An elephant, who, in the courſe of the laſt war between the *French* and the *Britiſh* in the *Eaſt Indies*, had received a fleſh wound by a cannon ball, after being once or twice conducted to the hoſpital to have his wound dreſſed, conſtantly attended of himſelf at the proper time, till it was healed. That the ſurgeon might operate, he readily extended himſelf on the ground. He bore with patience the application even of fire to his wound. The acuteneſs of the pain would ſometimes force from him a plaintive groan. But to the hand who, by inflicting momentary torments, ſought to accompliſh his cure, he expreſſed none but emotions of gratitude. Gratitude is indeed repreſented by all who have had opportunities of obſerving his manners, as the moſt eminent feature in the character of the elephant. At the ſight or the cry of his maſter or benefactor in danger, he forgets all regard to his own ſafety.

At *Decan*, an elephant, in revenge for the violation of a promiſe of reward for ſome extraordinary exertions, killed his cornack. The poor man's wife witneſſed the ſcene. Wild with deſpair for the loſs of her huſband, ſhe threw her two children at the feet of the furious animal, crying, "Why ſpare me or my children, ſince you "have ſlain my huſband?" The elephant became inſtantly calm, took the eldeſt boy on his trunk, placed him on his neck, and adopting him for his cornack, would never obey any other conductor.

At *Pondicherry*, a ſoldier who had uſed to ſhare his arrack with an elephant whenever he received his pay, happening one day to get drunk, was purſued by the guard, who meant to put him into confinement. He retreated under the belly of his friend the elephant, who

with his trunk beat off his purſuers. The ſoldier fell aſleep. When he awaked next day, having ſlept away his intoxication, he was much alarmed to find himſelf under the belly of ſo enormous an animal. The elephant, however, eaſed his fears by careſſing him with his trunk, and diſmiſſing in the moſt friendly manner.

An elephant at *Verſailles* was very carefully obſerved by the members of the *French* Acadamy of Sciences, and many other viſitors.

He diſcovered conſiderable penetration, ſeemed to know when he was mocked, and waited for an opportunity to revenge the affront.

A man pretending to throw ſomething into his mouth, made him gape for nothing. The diſappointed elephant, in high reſentment, knocked the wag down, and broke two of his ribs with a blow of his trunk; then trampled on him with his feet, and kneeling, endeavoured to pierce his belly with his tuſks. He was however reſcued.

A painter wanted to draw this ſame elephant in an unuſual attitude, with his trunk elevated, and his mouth open. To make him remain in this poſition, an attendant threw fruits, from time to time, into his mouth. But he often only pretended to throw, without giving any. The elephant at length, teazed and irritated, and obſerving that it was to gratify the painter the ſervant treated him with ſuch impertinence, turned his eye upon the maſter and his work, and by ſquirting a quantity of water from his trunk, entirely ſpoiled the drawing.

In *India*, a large elephant employed to launch a veſſel, found his exertions unequal to the taſk. His maſter, in a contemptuous ſarcaſtic tone, bade the keeper take away that lazy beaſt, and bring another of greater

ſpirit

ſpirit and activity. The poor animal, with generous indignation, renewed his efforts, till he fractured his ſkull, and died on the ſpot.

In *Delhi*, an elephant, paſſing through the ſtreets, put his trunk into the door or window of a taylor's ſhop, where were ſeveral people at work. A wag of the company pricked the end with his needle. The beaſt removed his trunk and paſſed on. But in the firſt puddle, filling it with water, he returned and ſpouted the whole upon the people in the ſhop, which entirely ſpoiled their work.

An Elephant in *Adſmeer*, had been accuſtomed to receive always a mouthful of greens from a certain herb-woman, as he paſſed through the *Bazar* or market. After ſome time, happening to be ſeized with one of thoſe periodical fits of madneſs to which theſe animals are ſubject, he broke his fetters, and ran furious through the market, while the trembling multitude fled before him. His benefactreſs fled among the reſt; but in her trepidation, left her child. The animal recollecting the child of ſo good a friend, or the ſpot where ſhe had uſed to ſit, took up the infant in his trunk, and gently placed it in ſafety, on a ſtall before a neighbouring houſe.

The natives of *Africa* greedily eat the fleſh of the elephant. The *Hottentots* and *Boſhieſmen*, in the neighbourhood of the *Cape* of *Good Hope*, eſteem it a very agreeable article of food; but the *Dutch* coloniſts regard the eater of elephant's fleſh with little leſs horror than a Cannibal. *Sparrman* relates that he ſaw the huts of ſome *Hottentots* in the ſervice of a farmer on *Diep-rivier* covered over with zig-zag ſlips of elephant's fleſh, ſome inches in breadth, and ſeveral fathoms in length, which they had thus laid out to dry; ſome of thoſe ſlips were wound round the huts, and others ſtretched between two. It

was in the beginning of *November;* they had lately been ſucceſsful in the chace; and " at this time," ſays this lively naturaliſt, " men, women, and children, had here " no other employment, but ſleeping, ſmoking, and eat- " ing elephant's fleſh *."

The tuſks of the elephant have long been applied, under the denomination of ivory, to a variety of important uſes, in the arts. Ivory is a material as well for the fine, as for the mechanic arts. In the country of *Sogno*, in Lower *Æthiopia*, the natives diſtill a water from the bones of the elephant's legs, which they eſteem an excellent remedy for aſthmas, ſciaticas, and ſeveral other complaints †. The *Giaghi* regard the tail of this animal with religious veneration. When a chief or ſovereign dies, an elephant's tail is conſecrated to preſerve his memory. The animal is hunted merely for his tail. A ſacred tail muſt always have been cut off from a living elephant, and at a ſingle ſtroke.

Over all the north of *Aſia*, and through ſeveral other parts of the globe, entire or partial ſkeletons of elephants are occaſionally found in a foſſil ſtate. Grinders and tuſks are numerous through *Siberia*. Theſe were once aſcribed to an imaginary animal under the name of *Mammouth*. Through *America* too, there are large animal ſkeletons found in a foſſil ſtate, which, though their ſtructure be ſomewhat different from that of the elephant, approach, however, nearer to this than to any other known ſpecies.

* Sparrman's voyage, i. 313. † Churchill, v. 486.

Division II.

Digitated Quadrupeds.

The first section of this diviſion ſhall conſiſt of digitated quadrupeds bearing ſome reſemblance, in their form and functions, to the human ſpecies.

Genus XV.—*Ape.*

The ſpecies of this genus are numerous, and widely diverſified in their characters. Some are large, others ſmall; ſome bear a nearer, others a more diſtant reſemblance to man. One part are deſtitute of tails; another claſs have indeed tails, but thoſe very ſhort; a third are furniſhed by nature with tails of a great length; and a fourth have long tails, with which they can perform all the functions of a hand.

But though thus diverſified, they are alſo connected by ſome general characteriſtics. In miſchievous artifice, they all diſplay a degree of human ingenuity: They are all filthy, obſcene, laſcivious, and thieviſh in their manners: They agree in uſing their fore *feet* rather as *hands*: The ſame activity of motion, the ſame frolic, chatter and grimace are common to them all: Peculiar deformity, rather than ſuperior beauty, ſeems to be, through all the ſpecies, the reſult of their near reſemblance to the human form. We are ſtruck with horror to ſee our own form,

form, features, and geſtures imperfectly imitated in an inferior order of quadrupeds. The firſt ſight of an ape, a monkey, a baboon, or an orang-outang ſhocks ſenſibility in the ſame manner as monſtrous deformity in an individual of our own ſpecies. Proud of our alliance to angels, we cannot but be aſhamed of our relation to monkies.

The tribe are ſcattered through all the regions of the torrid zone. The woods of *Africa*, the foreſts of *South America*, the wide continent and the iſlands of *India*, are copiouſly filled with apes, monkies or baboons.

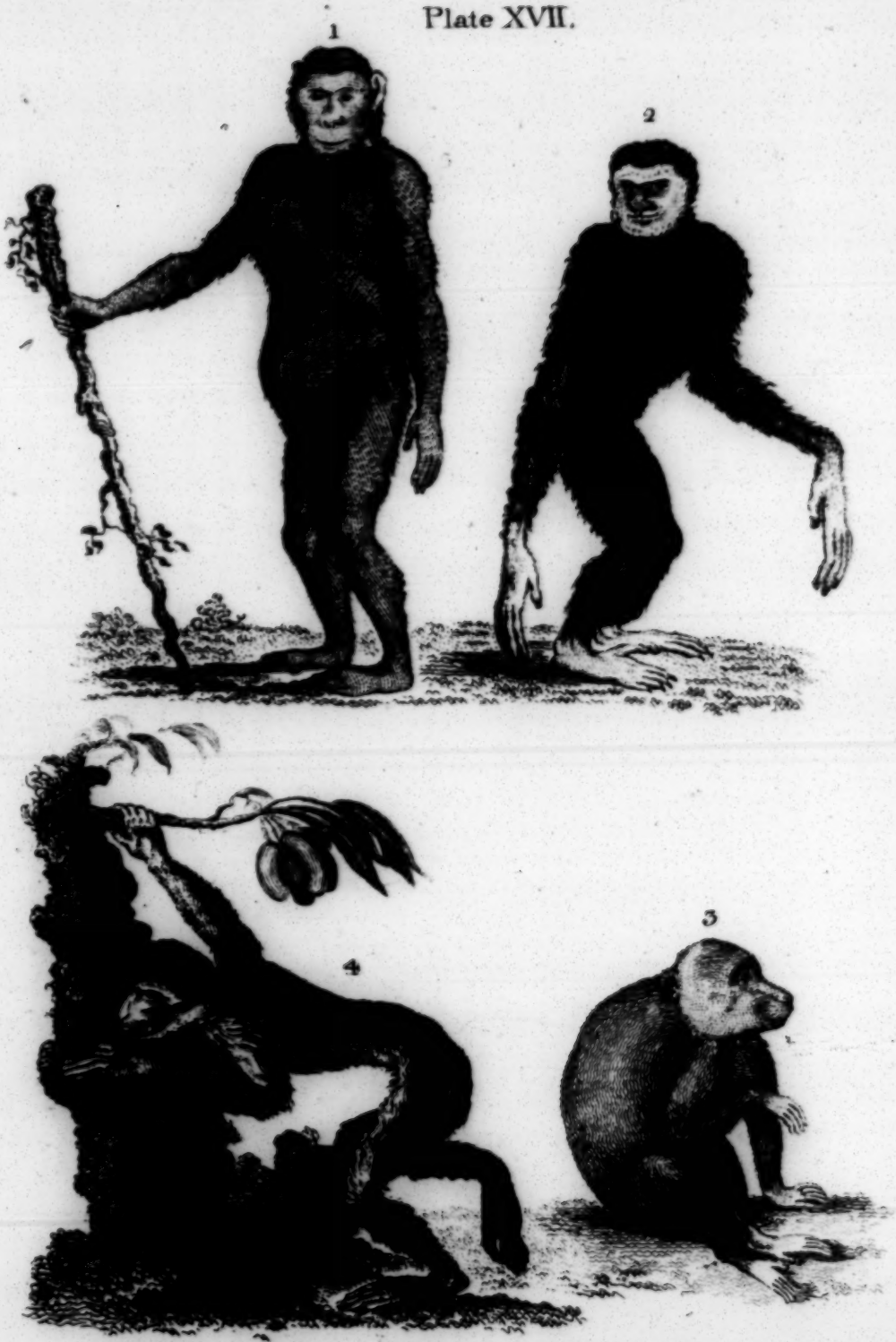
I. *Great Ape, or Orang-outang* *.

Of this ſpecies the individuals are from two to five or ſix feet high. Shaggy reddiſh hairs, ſcarce an inch long, cover the body thinly over. On the head, the back, and the buttocks, the hair is longer than on the other parts. The brow is bare; the face is flat, and preſents a deformed imitation of the human countenance; the ears are ſhaped exactly like ours; the colour of the face and paws is tawny.

In underſtanding and diſpoſitions, theſe animals approach the human ſpecies no leſs than in form. Wild in the woods, they diſplay a ſavage ferocity of character. The negroes of *Africa* regard them with terror, as a foreign race come to conquer and appropriate their country; who, though ſufficiently capable of articulate language,

* Unknown to ancient naturaliſts; *Simia ſatyrus* of the Syſt. Nat.; *Pongo*, *Jocko*, and *Orang-outang* of Buffon; *Great Ape* of Mr. Pennant; *Man of the Wood*, &c.

Plate XVII.



LOURAN OUTANG 2. GIBBON 3. PIGMY APE 4. MAGOT

guage, maintain a ſtubborn ſilence, that they may not be compelled to labour; they often attack, and beat or kill the negroes; they are ſaid to carry off young negreſſes for the purpoſes of pleaſure; they feed on nuts and other fruits; they drive off elephants and other large animals with clubs, or even beat them with their fiſts; they walk erect, but occaſionally creep on all four; they climb trees with great agility; and commonly ſecure themſelves, by night, among the branches of ſome tree. Rude huts of their conſtruction are ſaid to have been ſometimes obſerved. Woods and mountains of difficult acceſs are their only haunts *. They aſſociate only in ſmall herds. A fire kindled at any time in the woods, attracts them round it: they warm themſelves eagerly while it continues to burn; but know not how to keep it alive, or rekindle it. Their carriage and manners are grave and ſtately. It does not appear that they unite to practice any ingenious arts, or carry on any great enterprizes in common. They are ardent in their venereal deſires. The period of geſtation is not exactly known; and we are equally ignorant, what length of years they live to. If they reſemble mankind in growth and the term of life, as well as in form and features, the remarkable differences of ſize which have been obſerved among different individuals of the ſpecies, may poſſibly have been owing to diſparities of age.

The *Indians* and *Africans* often ſhoot them with poiſoned arrows. The young ones are ſometimes taken alive; the old are ſecure from capture by their ſtrength and ſwiftneſs. Only ſome parts of *Africa*, and the large iſlands on the eaſt of *India* afford the ſpecies.

* D'Obſonville, 358.

Some individuals have been exhibited alive in *Europe*; and ſeveral have died in their paſſage from their native regions.

In confinement, for we cannot with propriety ſay, in a domeſticated ſtate, they have ſeldom diſcovered remarkable ferocity. They have even been brought to imitate the manners of mankind with conſiderable dexterity and addreſs. An orang-outang has been known to pay a ready obedience to words and ſigns. *M. de Buffon* relates *, that he had ſeen one ſit at table, open his towel, wipe his lips, carry his victuals to his mouth with a ſpoon or fork, pour his wine into a glaſs, and hob-nob with the perſon who drank. If invited to drink tea, he would bring a cup and ſaucer, place them on the table, put in ſugar, pour out the tea, and wait till it cooled before attempting to drink. He received ſweetmeats with great fondneſs; and was accordingly pampered with ſuch quantitites, that, by promoting a cough with which his breaſt was affected, they contributed to ſhorten his days. *M. de la Broſſe* relates of two orang-outangs, a male and a female, which he had purchaſed in *Africa*, that they would ſit at table, and help themſelves with their food like human beings: They would make ſigns for what they wanted, and expreſs reſentment when neglected. The male falling ſick, required attendance juſt as a man would have done. He even allowed himſelf to be twice bled in the right arm; and whenever he happened afterwards to find himſelf ill, he would hold out his arm to be bled, as if ſtill ſenſible, what beneſit he had formerly received from the operation.

* viii. 87.

II.—*Pygmy Ape* *.

THE flatneſs of their face and nails, the nakedneſs of their buttocks, the want of a tail, and their upright carriage, give this ſpecies ſome reſemblance to the human form. But they are not larger in ſize than a common cat; the colour of the upper part of the body is an olive brown, and beneath it is yellowiſh.

Individuals are often to be ſeen among our exhibitions of wild beaſts. They feed on fruits; but are greedy of inſects, particularly of ants, and ſearch for them with eagerneſs and dexterity. They ſmile and frown, and learn to mimic our forms of ſalutation. The malice and mimicry of an ape are often alluded to in books and converſation. They contract ſuch familiarity with mankind as to be eaſily fed with the hand.

They are natives of the different countries of *Africa*, and of the iſland of *Ceylon*. In *Æthiopia* they are numerous. This race are the pygmies of antiquity, repreſented as a dwarfiſh nation of mankind, who waged war with cranes, and were at length utterly deſtroyed by their victorious enemies. Ariſtotle talks ſeriouſly of ſuch a nation. But *Strabo* obſerves, that no perſon worthy of credit ever related that he had actually ſeen them. *Ethiopia* was one ſeat of that imaginary nation; and the cranes of the *Nile* were thoſe with which they were ſuppoſed to war. Mr. *Addiſon* has celebrated the war between the pygmies and the cranes in one of the fineſt ſpe-

* Simia Silvanus of the Syſt. Nat. Pygmy of Pennant, and the Tranſlator of Buffon; Simia of different writers.

cimens of modern Latin poetry. The *Indians* once wiſely availed themſelves of this fable. They embalmed the bodies of apes, and ſold them to merchants as genuine remains of a pygmy race of mankind.

In their native foreſts, theſe animals aſſemble in troops, fly when attacked, but turn upon their purſuers, if overtaken, and often eſcape by flinging the ſubtile ſand of the deſert, to blind their eyes. To catch them, the natives put ſtrong inebriating liquors into the caverns which they frequent; after intoxicating themſelves, they fall aſleep, and are then eaſily taken. They are more mild and docile, and eaſier tamed than any other ſpecies of the ape.

Long-armed Ape *.

This ſpecies is eaſily diſtinguiſhed by the prodigious length of his arms, which touch the ground when the animal ſtands erect. His flat ſwarthy viſage, ſurrounded with grey hairs, his erect carriage, the want of a tail, flat nails, and round naked ears, give this creature alſo a diſtant reſemblance of the human figure, though hideouſly deformed. His body is rough, all covered with black hair, except his buttocks, which are bare. His feet are long; his eyes are large, but ſunk deep in their ſockets. His canine teeth are proportionably larger than thoſe of man. His height from two and a half to four feet.

Theſe animals are mild and gentle in their manners. Their movements are not too briſk or precipitant, but lively

* Simia Lar of the Syſt. Nat. Long-armed Ape of Pennant; Gibbon of the Tranſlator of Buffon; Golok of Bengal; Pefe of China.


PL.XVIII.
Large Baboon
Tufted Ape
Long tailed Monkey
Mandrill
Wanderow
Macaque

lively and quick. They walk erect, and never on all four. In the *Eaſt Indies*, where they are natives, in the interior parts of *Bengal*, on the *Coromandel* coaſt, in *Malacca*, the *Malucca* iſlands, and in *Sumatra*, they are ſeen by hundreds on the tops of trees.

They are found alſo in more northern provinces, as far as the frontiers of *China*; but they are afraid of cold and moiſture, and do not live long in a climate more ſevere than that in which they have been bred. Their food conſiſts of the fruits, leaves, and bark of trees. There are ſome varieties of this ſpecies with reſpect to ſize and colour; but their diſtinctive characters and manners are ſimilar.

IV.—*Barbary Ape* *.

THIS creature is a remove ſtill farther from the human form. Its face is long, and not unlike that of a bull-dog. Agreeable to this character, its canine teeth are both long and ſtrong. Its ears reſemble thoſe of the human ſpecies; its nails are flat. The upper part of its body is of a dirty greeniſh brown, and its belly of a dull pale yellow. It has down on its face, and cheek pouches. It has alſo large prominent calloſities on its buttocks, and a ſmall appendix of ſkin apt to be miſtaken for a tail. It walks on the two hind feet at times, but more frequently on all four. When erect upon its two hind legs, it is generally two feet and a half high; ſome are three, others are found four feet in height. Apes of this ſpecies inhabit many parts of *India*, *Arabia*, and all parts

* Simia Inuus of the Syſt. Nat. Barbary Ape of Mr. Pennant. The Magot or Barbary Ape of the Tranſlator of Buffon. The Cynophalus of Ariſtotle and Pliny.

parts of *Africa*, except *Egypt*. They agree with the temperature of our climate the beſt of any ſpecies of apes without tails; but they are ill-natured, miſchievous and fierce. By the force of diſcipline, they are made to play ſome tricks in our common exhibitions of animals; but are more dull and ſullen than the reſt of the ape tribe. In *India*, they aſſemble in the fields in great troops, and frequently attack women going to market, and rob them of ſuch articles of proviſion as they happen to carry. In the woods, the females carry their young in their arms, and leap from tree to tree with them. Their food is of the ſame ſort with that of the others of the ſame genus: they too, like the reſt, ſleep perched upon trees.

Apes were worſhiped in *India*, and magnificent temples were erected to their honour.

When the *Portugueſe* plundered one in *Ceylon*, they found, in a little golden caſket, the tooth of an ape, a relique held in ſuch veneration by the natives, that they offered 700,000 ducats to redeem it; but in vain; for it was burnt by the viceroy, to ſtop the progreſs of idolatry. Hudibras, in his poem, hints at this piece of hiſtory.

The orang-outang, the pygmy, the long-armed and *Barbary* ape, are the only animals to which the generic name of *ape* ought to be applied, as they alone want the tail, and of their own accord walk oftener on two feet than on four. The orang-outang, and the long armed ape, are very different from the pygmy and *Barbary* ape, and may alſo be eaſily diſtinguiſhed from each other. But as the two latter have a perfect reſemblance, except in the length of the muzzle, and the largeneſs of the canine teeth, the one has frequently been miſtaken for the other.

Baboons.

Such apes as have tails ſhorter than their bodies come under this denomination, and require a kind of ſubordinate ſection. They reſemble man in the hands only, They have ſharp nails, a large muzzle; and though not perfectly hideous in their form, yet, from their manners, excite in the human breaſt a degree of horror not to be expreſſed.

V.—*Great Baboon* *.

This animal, when erect, is from three to five feet in height, exceſſively fierce, libidinous and ſtrong. Its eyes are of a hazel colour; its ears ſmall and naked; its face like that of a dog, but very thick: the middle of the face and forehead naked, of a bright vermilion colour; the tip of the noſe of the ſame colour, but truncated like that of a hog; the ſides of the noſe broadly ribbed, and of a fine violet hue; the opening of the mouth very ſmall; its cheeks, throat, and goat-like beard, yellow: the hair on its forehead is long and black, and turns back like a toupee. The reſt of the head, the arms and legs, are covered with ſhort hair, yellow and black intermixed; the breaſt with long whitiſh yellow hairs; the ſhoulders with long brown hair: the hairs of the belly of an aſh colour, ſpeckled like the ſides of a partridge.

Its

* Simia Sphinx of the Syſt. Nat.; in Latin Papio; in French Le Papion or Babouin, at the Cape Choac-rama.

Its nails are flat; its feet and hands black. Its tail ſtands erect, and is very hairy, from four to ſix or ſeven inches in length. The rump of a vermilion colour; and the beautiful colours on the hips, are gradations from red to blue; the inſide of the thighs a light blue.

After ſuch a variety of lively colouring, one would wiſh to bring forward the leaſt inoffenſive part of this creature's general character.

Baboons, though miſchievous and fierce, are not carniverous. They live chiefly on fruits, roots and ſeeds, and aſſemble in troops for the purpoſe of robbing gardens, orchards and vineyards. On theſe expeditions, ſome of them enter the incloſure, while others remain on the wall as centinels, to give notice of any approaching danger. The reſt of the troop are ſtationed without the garden, at convenient diſtances from each other, and thus form a line, which extends from the place of pillage to that of their rendezvous. Matters being diſpoſed in this manner, they begin the operation, and throw to thoſe on the wall, melons, gourds, apples, pears, or other fruit. Thoſe on the wall, throw theſe fruits to their aſſociates below; and thus the ſpoils are handed along the whole line. They are ſo dexterous and quick-ſighted, that they ſeldom allow the fruit to fall in throwing it from one to another. All this is performed in profound ſilence, and with great diſpatch. When the centinels perceive any perſon, they cry; and, at this ſignal, the whole troop fly off with aſtoniſhing rapidity. They are paſſionately fond of raiſins, apples, and, in general, of all fruits which grow in gardens. They neither eat fiſh nor fleſh, except when boiled or roaſted; but then they devour both with avidity. They are very fond of cheeſe.

Buffon thus deſcribes one that he ſaw: "Perpetually "grinding his teeth, fretting and chaffing with rage, his "owner

owner was obliged to keep him confined in an iron cage, the bars of which he moved ſo powerfully with his hands, that he inſpired the ſpectators with terror. He is a ſquat animal, whoſe compact body and nervous members indicate ſtrength and agility. He is covered with long cloſe hair, which gives him the appearance of being larger than he is in reality. His ſtrength, however, is ſo great, that he would eaſily overcome one, or even ſeveral men, if not provided with arms. Beſides, he is continually agitated by that paſſion which renders the gentleſt animals ferocious. He is inſolently ſalacious; affects to ſhew himſelf in this ſituation, and ſeems to gratify his deſires, in the moſt deteſtable manner, before the whole world. He preſents the parts of generation with an effrontery that can originate from nothing but the moſt inordinate deſire. Other apes are taught modeſty by the whip; but the baboon is perfectly incorrigible; nothing can tame him. Notwithſtanding the violence of their paſſion, theſe animals produce not in temperate climates. The female generally brings forth but one young one at a time, which ſhe carries between her arms, in a manner, fixed to her pap. They abound in the hotter parts of *Africa*, in *Borneo* and the *Philippine* iſlands. In theſe iſlands the baboons are ſo troubleſome, that the women dare not go far from their own houſes.

In Auguſt 1779, there was exhibited at *Edinburgh* a male baboon, remarkable for its magnitude, ſtrength and beautiful colours. He was exceſſively fierce, preſented uniformly to the ſpectators the moſt threatening aſpect, and attempted to ſeize every perſon that came within the reach of his chain. On ſuch occaſions, he made a deep grunting noiſe, and toſſed up his head almoſt perpetually. He was very fond of the ears of wheat, the grains of

which he dexterouſly picked out, one by one, with his teeth.

Mr. *Schreber* ſays, that this ſpecies lives on ſucculent fruits and on nuts; that it is very fond of eggs, and will put eight at once into its cheek pouches; and taking them out one by one, break them at the end, and ſwallow the yolk and white; that it will drink quantities of wine and brandy; that it is leſs agile than other baboons, but very cleanly; and that it immediately flings out its excrements out of its hut. Such are the accounts given of this creature, which takes the lead among the different ſpecies of baboons.

VI.—*Ribbed Noſe Baboon* †.

THIS baboon has a long naked noſe, of a purple colour, compreſſed ſideways, and ribbed obliquely on each ſide; on the chin a ſhort, picked, orange beard: its tail, which is between two and three inches long, and very hairy, it carries erect; its buttocks are bare; its hair is ſoft and long, of a reddiſh brown upon the body, and grey upon the breaſt and belly. It has cheek pouches; its ears, the palms of its hands, and the ſoles of its feet, are naked.

The uglineſs of this baboon is perfectly diſguſting. From his noſtrils diſtils perpetually a kind of ſnot, which, with his tongue, he licks into his mouth. His body is of a ſquat figure; his buttocks are of a blood colour. The deep longitudinal wrinkles or ribs, on each

† Simia Maimon of the Syſt. Nat. The Mandrill or Ribbed Noſe Baboon of the Tranſlator of Buffon. The Mandrill of the Engliſh on the Coaſt of Guinea.

each ſide of his noſe, augment the ſullenneſs and deformity of his aſpect.

They differ as to ſize; ſome are only two feet long from the noſe to the tail; others four, or even five. They are more tractable, and leſs impudent than the great baboon, but equally diſagreeable. They are found on the Gold coaſt, and other ſouthern provinces of *Africa*, and are called *boggo* by the negroes, and *mandrill* by the *Europeans*. Some derive the latter name from the Engliſh word *man*, and *drill*, a word uſed in ſome *French* provinces to denote a *vigorous libertine*.

The animal called the *ſmitten* by ſome writers, is to be referred to this ſpecies. It is of a mouſe colour, grows to the ſize of five feet, is very fierce, and will even attack a man.

Pennant refers to this ſpecies the *tre, tre, tre, tre* of *Madagaſcar* alſo, which the tranſlator of *Buffon* claſſes with the great baboon. This animal is deſcribed to be of the ſize of a calf of two years old; to have a round head; the viſage and ears of a man; the feet of an ape; its hair curled; and to be a ſolitary ſpecies, greatly dreaded by the natives.

VII.—*Wood Baboon.*

THIS baboon has a long dog-like face, of a gloſſy black. His hands and feet are black, and naked, like the face. His nails are white. His body is covered on all parts with long hair, elegantly mottled with black and tawny. His tail meaſures not quite three inches; it is very hairy on the upper part.

When erect, he is about three feet high. He inhabits *Guinea*, and is called by the *Engliſh*, *The Man of the Wood*.

VIII.—*Yellow Baboon.*

THIS creature greatly reſembles the wood baboon, excepting that it differs from it in ſize and colour, and has hairy hands. Its ears are hid in its fur: there are ſeveral long duſky hairs over its eyes; its hands are covered with hair above; its colour is a bright yellow, mottled with black. It is about two feet long, and is probably a native of *Africa*.

IX.—*Cinereous or Aſh-coloured Baboon.*

THIS baboon is diſtinguiſhed by his duſky face, pale brown beard, and his crown mottled with yellow. His body and limbs ar of a cinereous brown.

X.—*Blue Face Tufted Baboon.*

THIS animal has a bluiſh face; two very flat and broad foreteeth; a pale brown beard; long hairs over each eye; and a tuft of hair behind each ear. The hair of his body is black, and cinereous, mixed with a dull ruſt colour. Its length is about three feet.

The

The four laſt ſpecies were deſcribed from ſpecimens in the collection of Sir *Aſhton Lever*; but their hiſtory is not ſo full and complete as ſome might wiſh, who are particularly anxious to diſcriminate all the varieties of this genus of brutes.

XI.—*Brown Baboon.*

THIS ſpecies of the baboon is diſtinguiſhed by its pointed ears, and face of a dirty white. Its noſe is large and broad. The colour of the upper part of its body is brown; of the under an aſh colour. Its tail is taper, almoſt bare of hair, and about four inches long. Its legs are much longer in proportion to the ſize of its body, than thoſe of the great or rib-noſed baboon. It is more frequently to be ſeen in the exhibitions of wild beaſts.

Females of the genus of apes, having bare buttocks, are ſubject to the menſes.

XII. *Little Baboon* †.

THE head and ears of this ſpecies are roundiſh; the mouth projects; the thumb is not remote from the fingers, as in the former kinds; the nails are narrow and compreſſed; thoſe of the thumb are rounded. The colour of its hair yellowiſh, tipt with black. Its face is brown; its tail not an inch long; its buttocks are covered with hair. It is about the ſize of a ſquirrel; an inhabitant of *India*, and a lively creature.

† Simia Apedia of the Syſt. Nat.

XIII.—*Creſted Baboon.*

THIS ſpecies derives its name from the very long and diſhevelled hair, of a duſky colour, on its crown and cheeks. Its breaſt is whitiſh; the reſt of the body and its limbs are covered with long black hair. Its face and feet are black and bare. Its tail ſlender and taper, about ſeven inches long. The whole length of the animal is about two feet. It inhabits *Africa*. To be ſeen in the *Leverian* muſeum.

XIV.—*Pigtail Baboon* †.

THIS ſpecies is eaſily diſtinguiſhed by its tail, which is four inches long, ſlender, exactly like a pig's, and almoſt naked. Its face is of a ſwarthy redneſs, pointed, but not ſo long as that of the laſt ſpecies. It has ears like thoſe of the human body; its eyes are of a hazel colour. It has two ſharp canine teeth; the crown of the head duſky; the hair on the limbs and body brown, inclining to an aſh colour, but paleſt on the belly. Its fingers are black; its nails long and flat. The thumbs on its hind feet are very long, and connected to the nearſt toe by a broad membrane. Its length from head to tail is twenty-two inches. Though full of vivacity, it has none of that impudent petulance peculiar to the other baboons; but is gentle, tractable, and even careſſing. It is found in *Sumatra*

† Simia Nemeſtrina of the Syſt. Nat. The Maimon or Pigtailed Baboon of the tranſlator of Buffon. The Pigtail Monkey of Edw.

matra and *Japan*. In the latter country, it is taught tricks, and carried about by mountebanks. One of theſe people informed *Kæmpfer*, that the baboon he had was one hundred and two years old.

There was one brought from *Sumatra* to *England* in 1752. It was a male, about the bigneſs of a houſe-cat, extremely lively, and full of action. It lived only twelve months in London.

Baboons with longer Tails.

XV.—*Dog-faced Baboon* †.

This creature has a long, thick, and ſtrong noſe, covered with a ſmooth red ſkin. Its eyes are ſmall; its ears pointed and hid in its hair. Its head is large and flat. The hair on the ſides of its head and the fore part of its body, as far as the waiſt, is very long and ſhaggy; grey and olive brinded; that on the top and hind part of the head, on the limbs and hind part of the body, very ſhort. Its limbs are ſtrong and thick; its hands and feet duſky. The nails on the fore feet are flat; thoſe on the hind like a dog's. Its buttocks are very bare, and covered with a ſkin of a bloody colour. Its tail, which is ſcarcely the length of the body, is carried generally erect.

The baboons of this ſpecies, in vaſt troops, inhabit the hotteſt regions of *Africa* and of *Aſia*. They are very fierce; exceſſively impudent, indecent and laſcivious. They rob gardens; and are dangerous to people paſſing the place where they happen to be. When they dare not attack paſſengers, they run up trees, ſhake the boughs at them

† Simia Hamadryas of the Syſt. Nat.

them with great fury, and chatter very loud. In *Arabia Felix* they infeſt the woods by hundreds, and oblige the owners of the coffee plantations to be continually on their guard againſt their depredations. They are quite untameable. Some of them are above five feet high.

The Urſine or *Bear Baboon,*

Seems to be a variety of the ſame ſpecies. It is covered with long duſky hair, and has, at firſt ſight, the appearance of a young bear; and hence it has its name. It has a great head, a long and thick noſe, and ſhort ears. Its crown is covered with long upright hairs. The part of the head immediately above the forehead is prominent, and terminates in a ridge. Its body is thick and ſtrong; its limbs are ſhort; its tail meaſures half the length of the body, and is arched at the end. Its nails are flat and round; its buttocks of a bloody redneſs. Even when ſitting, it meaſures four feet in height; and when erect, is as high as a middle ſized man. They are very numerous near the *Cape of Good Hope*, and go in troops among the mountains. When they ſee any perſon approach, they ſet up an univerſal and horrible cry, for about a minute or two, and then conceal themſelves in their faſtneſſes, keeping a profound ſilence. They hardly ever deſcend into the plains, unleſs it be to pillage the gardens which lie at the foot of the mountains. It is ſaid that plundering parties place centinels to prevent ſurprize; that, on ſight of a man, the centinel gives a yell, and the whole troop retreat with great expedition, in a moſt diverting manner, the young clinging to the backs of the parents.

When taken and confined, they become tolerably tame, but are very revengful when provoked. They are ſtrong enough

enough to draw the ſtrongeſt man to them, notwithſtanding all the reſiſtance he can make. They uſually lay hold of the ears, and will bite off one as cloſe as if it were done with a razor.

XVI.—*Mottled Baboon* *.

THIS creature has its noſe covered with a duſky red ſkin; the hair on the head, neck, ſhoulders, and breaſt, very long; on other parts ſhorter; its colour is a mixture of tawny, black, and brown; its feet duſky; buttocks, naked and hideous; its height, when ſitting up, about three or four feet; it has all the deteſtable manners of the other kinds already enumerated.

XVII.—*Lion-tailed Baboon* †.

THE tail of this animal, terminated with a tuft of hair like that of a lion, has procured it the name here given it. It has a long dog-like face of a duſky colour; a very large and white or hoary beard; (the beards of the females are brown); and large canine teeth; its nails are flat; its body is covered with black hair; its belly is of a lighter colour; it is about the bulk of a middling-ſized dog, and inhabits the *Eaſt Indies*, and the hotter parts of *Africa*.

There was one ſhewn in *London* ſome years ago, exceſſively fierce and ill-natured; its tail was not longer

* The Baboon properly ſo called of the Tranſlator of Buffon.

† Simia Veter five Selenus of the Syſt. Nat. Wanderu and Lowando of the Tranſlator of Buffon.

than its back, and ended in a large tuft; its beard reached quite up the cheeks as far as the eyes. To thoſe already ſpecified may be added, the *little-bearded men* about two feet high, black as jet, with long white beards, mentioned by different voyage-writers *. The negroes ſet a great value on the ſkins of this ſpecies, and ſell them to one another at eighteen or twenty ſhillings each. Of theſe ſkins they make the caps for the tie-ties or public criers. Thus human ingenuity has found one uſe they can ſerve.

The detail of ſo many varieties of ſuch deteſtable creatures, apparently of no manner of uſe to the world, might appear tedious and diſguſting, were we to conſider the world as made for man alone. There are more creatures than apes that might ſerve to humble our pride, and teach man gratitude to his Maker. Beſides, we are not more ſerviceable to them than they to us. They enjoy life, and that portion of happineſs for which they were originally deſigned.

But we proceed to the following varieties, which form another ſubordinate claſs of apes. Thoſe, having tails longer than their bodies, are denominated *monkies*. Of theſe again, there are two claſſes; one, the tails of which are not prenſile; the other having prenſile tails, which, in laying hold of any thing, ſerve the purpoſes of a hand. We begin with the former.

Monkies of *Aſia* and *Africa* whoſe tails are ſtraight and not prenſile, and which have (generally) naked buttocks, and pouches within each lower jaw for the reception of their food.

* Barbot Voy. Guinea, 212. Boſman, 242.

XVIII.—*Purple-faced Monkey* *.

THIS monkey hath a great triangular white beard, ſhort, and pointed at the bottom, and extended, in a winged faſhion, on each ſide of the ears, far beyond them; its face and hands are purple; its body black; and its tail, which is much longer than the body, is terminated with a dirty white tuft. It is a native of *Ceylon*, is very harmleſs, lives in the woods, and feeds on the leaves and buds of trees. When taken it ſoon becomes tame. There is a variety of it entirely white; but in form exactly like the others.

Theſe are much ſcarcer, and more dangerous than the black ones. In *Macacar* ſome of theſe are of the ſize of a bull-dog, and raviſh and ſtrangle women when they can lay hold on them.

XIX.—*Palatine Monkey* †.

THIS monkey has a triangular black face, bordered all round with white hairs; theſe, on the chin, are divided into a long forked beard; its back is of a duſky colour; its head, its ſides, and the outſides of its arms and thighs, the ſame; but each hair is tipped with white; the breaſt, the belly, and the limbs, are white, when ſhewn in *Europe*, but, in their native country, of an orange colour, for they fade in colder climates; its tail and body,

* In his firſt edition, Mr. Pennant deſcribed this animal as a variety of the lion-tailed baboon; but upon reconſideration, ranked it as a ſeparate ſpecies.

† Simia Roloway of the Syſt. Nat.

each about a foot and a half. In *Guinea*, its native country, it is called a Roloway; is very full of frolic; fond of the perſons it is acquainted with, but averſe to others.

XX.—*Hare-lipped Monkey* *.

THIS animal has its noſtrils divided like thoſe of a hare; its noſe is thick, flat, and wrinkled; its head is large, eyes ſmall, teeth very white, body thick and clumſy; its buttocks are naked; its tail is long; its colour varies; it is ſometimes like that of a wolf, but in others brown, tinged with yellow or olive; the belly and the inſide of the limbs are of a light aſh colour; the tail is rather ſhorter than the body, and is always carried arched. It is a native of *Guinea* and *Angola*, and is full of frolic and ridiculous grimace.

Pennant reckons the *Malbrouck* of *Buffon* only a variety of this ſpecies. There was one ſhewn in *London* ſome years ago, equal in ſize to a ſmall greyhound.

Animals of this ſpecies are never more than half tamed, and always require a chain. Even in their own country they never produce when in bondage; they require to be at perfect freedom in the woods. When fruits and ſucculent plants fail, they eat inſects, and ſometimes deſcend to the margins of rivers and the ſea coaſt, to catch fiſhes and crabs; they put their tail between the pincers of the crab, and whenever the pincers are cloſed, they carry it quickly off, and eat it at their leiſure; they gather the cocoa nut, and are well acquainted with the method of extracting the juice for drink, and the kernel for

* Simia Cynomolgus of the Syſt. Nat. The Macaque of the Tranſlator of Buffon.

for food; they likewiſe drink the *zari* that drops from the bamboos, which they place on the tops of trees in order to extract the liquor; they are taken by means of a cocoa nut with a ſmall hole made in it; they put their paw into the hole with difficulty, becauſe it is narrow; and the people who are watching the opportunity, ſeize them before they can diſengage themſelves. In the provinces of *India*, inhabited by the *Bramins* who kill no animals, the number of this ſpecies, which are highly venerated, is almoſt infinite. They come in troops into the cities, and enter the houſes, at all times, with perfect freedom. In *Amadabad*, the capital of *Guzarat*, there are three hoſpitals for animals, where lame and ſick monkeys, and even thoſe, who, without being diſeaſed, chooſe to dwell there, are fed and cheriſhed. Twice every week, the monkeys in the neighbourhood aſſemble in the ſtreets of the city; they then mount upon the houſes, each of which has a ſmall terrace or flat roof, and lie there during the great heats. On thoſe two days, the inhabitants fail not to lay upon the terraces, rice, millet, ſugar canes, and other fruits in their ſeaſon. If theſe animals find not their proviſions in the accuſtomed place, they break the tiles which cover the reſt of the houſe, and commit great outrages. In places frequented by the monkeys, the birds dare not build their neſts on the trees; for they never fail to deſtroy them.

A certain traveller remarks, that the apes are maſters of the foreſts; for their dominion is not diſputed either by the tiger or the lion, ſince they eaſily eſcape them by their nimbleneſs, and live on the tops of trees ſecure beyond their reach. The only animals they have to dread, are the ſerpents, who make perpetual war upon them. Some of theſe ſerpents are of prodigious ſize, and ſwallow

an

an ape in a moment. Others are ſmaller, but more agile, and go in queſt of the apes along the branches of the trees; and the more effectually to ſecure their prey, they watch the time when the apes are aſleep *. Thus, creatures that are the objects of our terror, prey upon others that are objects of our diſguſt.

XXI.—*Spotted Monkey* †.

THE ſpotted monkey is a ſpecies of a middle ſize; it has a long white beard; the upper parts of its body are reddiſh, as if they had been ſinged, and are marked with white-ſpecks; the belly and chin are whitiſh, and the tail very long. *Linnæus* deſcribes his Diana monkey ſomewhat differently. He ſays, it is of the ſize of a large cat, black, ſpotted with white; that the hind part of the back is ferruginous; its face black, and its beard pointed, black above, and white beneath, placed on a fattiſh excreſcence; that its breaſt and throat are white; that a white line paſſes from the noſe over each eye in an arched form to the ears; that there is a white line paſſing from the rump croſs the thighs; that the tail is long, ſtraight, and black; that the ears and feet are of the ſame colour; and that it has large canine teeth. It inhabits *Guinea* and *Congo*.

* Deſcript. hiſtorique de Macacar, page 51.

† Simia Diana of the Syſt. Nat. The Exquima of the Tranſlator of Buffon.

XXII.—*Long-noſed Monkey.*

THIS monkey has a very long ſlender noſe, covered with a fleſh-coloured, naked, ſkin; the hair on its head falls back; that on its body and breaſt is long; the colour of the head and upper part of the body and limbs is pale or ferruginous, mixed with black; that of the breaſt and belly light aſh; its tail is very long; the height of the animal, when ſitting, is about two feet; its face is very much like that of a long-noſed dog; it is very good natured. *Pennant*, who deſcribes it, is uncertain as to its country; but thinks it is probably from *Africa*. He alſo mentions another animal, which he calls the prude, and which he thinks may poſſibly be related to the former.

XXIII.—*Yellowiſh Monkey.*

THIS creature is of the ſize of a fox, has a black face, great black naked ears, and great canine teeth; on the ſide of the cheeks, long hairs of a pale yellow, falling backward towards the head; long hairs above each eye; the throat and breaſt of a yellowiſh white, and its upper parts cinereous mixed with yellow; on the lower parts, and on the tail, the cinereous or aſh colour predominates; the hair on the body is coarſe; the tail is as long as the body.——To be ſeen in the Leverian Muſeum.

XXIV.—*Green Monkey* *.

This monkey has a red flattiſh face and a black noſe; the ſides of its face are bounded by long yellow hairs falling backwards like a muſtachio, and almoſt covering its ears, which are black, but ſhaped like thoſe of the human face; the head, limbs, upper part of the body and tail, are covered with ſoft hairs of a yellowiſh green colour at their ends, of an aſh colour at the roots; the under ſide of the body and tail, and the inner ſide of the limbs, are of a ſilvery colour; the tail is very long and ſlender; the ſize of this monkey is equal to that of a ſmall cat.

Monkies of this ſpecies inhabit different parts of *Africa*; they keep in great flocks, and live on trees in the woods, where they are almoſt entirely concealed by the leaves, and would ſcarce be noticed, were it not for the branches which they break in their gambols; though in theſe they are very agile and ſilent; even when ſhot at, they do not make the leaſt noiſe; but will unite in company, knit their brows, and gnaſh their teeth, as if they meant to attack the enemy. They are very common in the *Cape de Verd* iſlands. They are found in the territories of ancient *Carthage:* hence it is probable that they were known to the *Greeks* and *Romans*. Sir *Aſhton Lever* had one from the *Eaſt Indies*, where they are alſo found.

* Simia Sabœa of the Syſt. Nat. The Calletrix or Green monkey of the Tranſlator of Buffon.

XXV.—*White-eye-lid Monkey* *.

This ſpecies has a long, black, naked, and dog-like face; the upper part of the eye-lids of a pure white; the ears black and like thoſe of the human body; no canine teeth; hairs on the ſides of the face; thoſe beneath the cheeks longer than the reſt; the colour of the whole body is tawny and black; the nails on the thumbs and fore fingers are flat; thoſe on the others are blunt claws; the tail, which it carries arched, as well as the hands and feet, are black; it is a native of *Madagaſcar*; there is a variety of it with a white collar.

XXVI.—*Muſtache Monkey* †.

Two large tufts of yellow hairs, like muſtaches, before its ears, ſerve to diſtinguiſh this monkey, and to give it a name; it has a ſhort noſe of a dirty bluiſh colour, and a tranſverſe ſtripe of white beneath it; the edges of both its lips, and the ſpace round the eyes, black; its ears are round, and tufted with whitiſh hairs; the hair on the top of the head is long and ſtands upright; there are ſome black hairs round its mouth; the colour of the hair on the head yellow mixt with black; on the body and limbs, a mixture of red and aſh colour; the reſt yellowiſh; the under part of the body is paler than the upper; the

* Simia Æthiops of the Syſt. Nat. The Mangabey or Monkey with white eye-lids of the Tranſlator of Buffon.

† Simia Cephus of the Syſt. Nat. The Muſtache of the Tranſlator of Buffon.

feet are black, nails flat; its length one foot; that of its tail eighteen inches. It is found in *Guinea*. *Buffon* ſeems to confound it with the following ſpecies.

XXVII. *The White-noſe Monkey* *.

THIS monkey has a black flat face; the end of its noſe is of a ſnowy whiteneſs; the irides of its eyes yellow; the hair on the head and body is ſmooth, mottled with black and yellow; its belly white; hands black; tail very long, the upper ſide black, the lower white; it inhabits *Guinea* and *Angola*. When taken young and tamed, it is very ſportive and diverting. In a wild ſtate, it avoids mankind; is very crafty, and has a very bad ſmell.

XXVIII.—*The Talapoin* †.

THIS monkey has a ſharp noſe, a round head, large black naked ears; the eyes and end of the noſe fleſh coloured; the hair on its cheeks is very long, and reflected towards the ears; on the chin it has a ſmall beard; the colour of the upper part of the body is a mixture of duſky yellow and green; the outſide of the limbs black; the inſide whitiſh; the lower part white tinged with yellow; its tail is very long and ſlender; above, of an olive and duſky colour; beneath, cinereous; the paws black; the length of the creature itſelf, is about one foot; its tail one foot five inches. It is an inhabitant of *India*.

* Simia Nictitans of the Syſt. Nat.

† This ſpecies bears the ſame name in the Tranſlation of Buffon.

XXIX.—*The Negro Monkey.*

THE negro monkey has a round head, a noſe a little ſharp, a face of a tawny fleſh colour, with a few black hairs; having eyes of a reddiſh hazel; the hair above the eyes long, uniting with the eye-brows; that on the temples partly covering the ears; its breaſt and belly of a ſwarthy fleſh colour, almoſt naked; the hair on the body, limbs, and tail, black, and pretty long; its paws are covered with a black ſoft ſkin; it is about the ſize of a large cat; is active, lively, entertaining, and good natured. It is found in *Guinea*.

XXX.—*The Egret* *.

THIS creature has a long face, and an upright ſharp-pointed tuft of hair on the top of its head; the hair on its forehead is black; the upper part of the body is of an olive, the lower of an aſh-colour; its eye-brows are large; its beard ſmall; and it is itſelf of the ſize of a ſmall cat. Monkies of this ſpecies are found in *Java*; they fawn on men and their own ſpecies, and embrace each other; they play with dogs, if they have none of their own ſpecies with them. If they ſee a monkey of another ſpecies, they greet him with a thouſand grimaces. When a number of them go to ſleep, they put their heads together. They make a continual noiſe during the night.

* Simia Aygula of the Syſt. Nat. The Egret of the Tranſlator of Buffon.

XXXI.—*The Mona* or *Monea* *.

This ſpecies is called by the Malayes, Monèa; it is diſtinguiſhed by a high, upright, ruſty tuft on the crown; its limbs and body are ferruginous, mixed with duſky; its belly and the inſide of its legs are whitiſh.

In general, the monkies have milder diſpoſitions than the baboons, and their character is leſs melancholy than that of the apes; they are extravagantly full of vivacity, but are not ferocious; they become tractable the moment their attention is fixed by fear or reſtraint. The mona is particularly ſuſceptible of education, and even of ſome degree of attachment to thoſe who take care of him. He is fond of ſpiders, ants, and other inſects,

XXXII.—*The Red Monkey* †.

The upper part of the body of this monkey, which is ſlender, is of a moſt beautiful bright bay, almoſt red, ſo vivid as to appear painted; the lower parts are of an aſh-colour tinged with yellow; the length of the body is about one foot ſix inches; the tail not ſo long; it has a long noſe; its eyes are ſunk in the head, and its ears are furniſhed with pretty long hairs; thoſe on each ſide of the face are long; its chin is bearded; over each eye, a black line extends from ear to ear.

It inhabits *Senegal;* is leſs active than other monkeys, but more inquiſitive. When boats are paſſing along the river, they will come in crowds to the extremities of the

* The Mona or Varied Monkey of the Tranſlator of Buffon.

† The Patas or Red Monkey of the Tranſlator of Buffon.

the branches, and ſeem to admire them with vaſt attention; at length they will become ſo familiar as to throw pieces of ſticks at the crew. If ſhot at, they raiſe hideous cries: ſome throw ſtones; others void their excrements in their hands, and throw them among the paſſengers.

There is another ſort of red monkey, called in *Guinea peaſants*, becauſe of their ugly red hair and figure, and their natural ſtink and naſtineſs.

Though, in every region of *Africa*, the ſpecies of apes, baboons, and monkeys are very numerous, ſome of which are pretty ſimilar; yet it is remarked by travellers, that they never intermix, and that each ſpecies commonly inhabits a different quarter of the country.

XXXIII.—*The Chineſe Monkey* *.

THIS animal hath a long ſmooth noſe, of a duſky colour; the hair on the crown of its head is long, lies flat, and is parted like that of a man; its colour is a pale cinereous brown, mixed with yellow; the belly is whitiſh. Monkies of this ſpecies inhabit, or rather infeſt *Ceylon*; they keep together in great troops, and rob the gardens of fruit, and the fields of corn. The natives are obliged to watch them the whole day; yet theſe monkies are ſo bold, that when driven from one end of the field, they will enter at the other, and carry off with them as much as their cheek-pouches and arms can hold. Thus laden, they hop away on their hind legs; but if purſued, they fling all away, except what is in their mouths, that it may not impede their flight; they are very nice in their choice of the millet, the uſual crop in the fields; they examine

* The Chineſe Bonnet of the Tranſlator of Buffon.

examine every ſtalk, and if they do not like it, fling it away; ſo that from this delicacy of choice, they waſte much more than all the quantity they eat.

XXXIV.—*The Bonneted Monkey.*

A CIRCULAR bonnet on its crown, conſiſting of upright black hairs, diſtinguiſhes this animal; of the ſize of a cat, having long hairs on the ſides of its cheeks; its body brown; its legs and arms black.

XXXV.—*The Varied Monkey* *.

THIS ſpecies of the monkey is deſcribed as having a ſhort black thick noſe; the orbits of its eyes and its mouth of a dirty fleſh colour; the hair on the ſides of its face, and under its throat, is long, of a whitiſh colour, tinged with yellow; its forehead is grey, having a black line, from ear to ear, above the eyes; the upper part of the body is duſky and tawny; the breaſt, belly, and inſide of the limbs are white; the outſide of its thighs and arms black; its hands and feet are black and naked; its tail of an aſh-brown; it is about a foot and a half long, and its tail about two.

It inhabits *Barbary*, *Æthiopia*, and other parts of *Africa*, and is very common. This kind gives the name of monkey to the whole tribe from the *African* word *Monne*, or rather from the corruption of it *Monichus* and *Monichi*.

Buffon

* The Mona or Varied Monkey of the Tranſlator of Buffon: The Monichus of Proſper Alpinus.

Buffon ſays, that the colour of its back is a mixture of red and black; that it has two ſmall white ſpots, one on each ſide of the root of the tail, and a creſcent of grey hairs on the front.

There is a variety of it of the colour of the back of a hare.

XXXVI.—*The Cochin China Monkey* *.

THE robe of this creature, variegated with many colours, diſtinguiſhes his ſpecies in a conſpicuous manner. Round his neck there is a collar of a purpliſh blue colour; a yellowiſh white beard ſurrounds his cheeks; his lips are black, and he has a black ring round his eyes; his face is ſhort and flat; both his face and ears are red; his head and body grey; his breaſt and belly are yellow; his legs are white below, and black above; his tail is white, and there is a large ſpot of the ſame colour on his loins; his feet are black, with ſeveral ſhades of different colours; his buttocks are covered with hair, which is the caſe with only three others of all the ſpecies of *apes* of *Aſia* and of *Africa*.

He inhabits *Cochin China* and *Madagaſcar*; lives moſtly on beans, and frequently walks on his hind feet; he is a very large ſpecies, about four feet long from the noſe to the tail; but his tail is not ſo long.

Travellers aſſure us, that in the ſtomachs of the large apes, in the ſouthern provinces of *Aſia*, bezoar ſtones are found, of a ſuperior quality to thoſe of the goats and gazelles. It is alleged that the bezoars of the apes are always round, while the other kinds are of different figures.

* The Douc of the Tranſlator of Buffon, which is alſo its name in Cochin China; In Madagaſcar it is called Sifac.

XXXVII.—*The Tawny Monkey* *.

THE face of this ſpecies is a little produced; that and the ears are fleſh coloured; its noſe is flattiſh; it has long canine teeth in the lower jaw; the hair on the upper part of the body is pale tawny, aſh coloured at the roots; the hind part of the back is orange; legs aſh, belly white; it is a creature of the ſize of a cat, and its tail is ſhorter than its body. It is an inhabitant of *India*, and is very ill-natured.

There is a variety of this ſpecies with a black face, and long black hairs on the cheeks; the body of a dull pale green; the limbs grey, and the tail duſky.

XXXVIII.—*The Goat Monkey*.

THIS ſpecies, deſcribed by Mr. *Pennant* from a drawing in the *Britiſh* muſeum, derives its name from its long goat-like beard; its blue naked face is ribbed obliquely; its whole body and limbs are of a deep brown colour; its tail is of conſiderable length; but the gentleman who deſcribes it, ſeems to fall ſhort of his uſual accuracy in this reſpect, that he does not aſcertain the ſize of the animal itſelf.

* Of Mr. Pennant.

XXXIX.—*The Full-bottom Monkey.*

This monkey has a ſhort black naked face, and a ſmall head; his head and ſhoulders are covered with long coarſe flowing hairs like a full bottomed perriwig of a dirty yellow colour mixed with black; his body, arms, and legs, are of a fine gloſſy black, covered with ſhort hairs; his hands are naked, and furniſhed with only four fingers; on each foot he has five very long ſlender toes; his tail is very long, of a ſnowy whiteneſs, with very long hairs forming a tuft at its end; his body and limbs are very ſlender; his ſize is above three feet. He inhabits the foreſt of *Sierra Leona* in *Guinea*, where he is called *bey* or *king monkey*. The negroes hold his ſkin in high eſtimation, and uſe it for pouches, and for coverings to their guns.

XL.—*Bay Monkey.*

This monkey derives its name, with great propriety, from its prevailing colour; its crown is black; but its back is of a deep bay; the outſide of its limbs black; its cheeks, the under part of its body and legs, are of a very bright bay; it has only four fingers on the hands, and on the feet five long toes; its tail is very long, ſlender, and black; its body and limbs very ſlender and meagre. Like the laſt ſpecies, it inhabits *Sierra Leona*: ſpecimens of both are to be ſeen in the *Leverian* muſeum.

XLI.—*The Annulated Monkey* *.

THIS ſpecies of monkey, deſcribed by Mr. *Pennant*, from a drawing in the *Britiſh* muſeum, has a flat face, long hairs on the forehead and cheeks; the upper part of the body and limbs of a tawny colour; the belly cinereous; the tail ſhorter than the body, annulated with a darker and a lighter brown, and its hands naked and black.

XLII.—*The Philippine Monkey* †.

THIS is an obſcure ſpecies, ſaid to come from the *Philippine* iſlands; its mouth and eye-brows are beſet with long hairs.

In deference to the judgment of the great *Linnæus*, we have given it a place, though its hiſtory is ſo very conciſe or imperfect, that we ſhould have ſcarce thought it merited ſuch diſtinction. It has one thing, however, to recommend it. It brings up the rear in the catalogue of the ape tribes, belonging to the old world.

We now paſs from the old continent to the new. All the four-handed animals formerly deſcribed under the generic names of *apes*, *baboons*, and *monkies*, belong excluſively to the old continent; or, rather to *Aſia* and *Africa*. The monkies of the new world, or the continent of *America*, differ from them, having neither pouches in their jaws, nor naked buttocks. Of many, the tails are prenſile and naked, on the under ſide, for a certain ſpace, next

* Simia Apella of the Syſt. Nat.

† Simia Syrichta of the Syſt. Nat.

next the end. Of others, the tails are not prenſile. *Buffon* diſtinguiſhes the former by the name of *ſapajous*, and the latter under that of *ſagoins*.

Monkies with Prensile Tails.

XLIII.—*The Preacher* *.

The monkies of this ſpecies in ſize exceed the largeſt of the old world, and approach that of baboons, being as large as a fox; they have black ſhining eyes, ſhort round ears, and a round beard under the chin and throat; the hair on their bodies is of a ſhining black, long, yet lies ſo cloſe that the animal appears quite ſmooth; the feet and the end of the tail are brown; the tail is very long, and is always twiſted at the end.

Singular as the name preacher, applied to a ſpecies of monkies may appear, their hiſtory is no leſs ſo; and were it not ſupported by good authority, it would ſeem quite fabulous. Several other authors corroborate the evidence of *Margrave*, a writer of the firſt authority, and a moſt able naturaliſt, who reſided long in the *Braſils* where theſe creatures abound. He ſpeaks from his own knowledge, and tells us, that morning and evening they aſſemble in the woods; that one mounts upon a higher branch, while the reſt ſeat themſelves beneath; that when he perceives them all ſeated, he begins, as if it were to harangue, and ſets up ſo loud and ſharp a howl as may be heard a vaſt way, ſome ſay a league; a perſon at a diſtance would think that a hundred joined in the cry; the reſt, however, keep the moſt profound ſilence, till he

* Simia Beelzebub of the Syſt. Nat. The Ouarine of the Tranſlator of Buffon.

ſtops and gives a ſignal with his hand; then, in an inſtant the whole aſſembly join in chorus, till he commands ſilence by another ſignal, which they obey in a moment; then the *orator* reſumes his diſcourſe, and finiſhes his addreſs, and the aſſembly breaks up. Their clamour is the moſt diſagreeable and tremendous that can be conceived, owing to a hollow and hard bone placed in the throat, which the *Engliſh* call the throttle bone. Theſe monkies are very fierce, quite untameable, and bite dreadfully; though not carnivorous, they excite terror by their frightful voice and ferocious aſpect. The female is of the ſame colour with the male, and differs from him only in being ſmaller; the females carry their young on their back, and leap with them from branch to branch, and from tree to tree; the young embrace, with their hands and arms, the body of their mother, and remain firmly fixed as long as ſhe is in motion; when ſhe wants to give her young one ſuck, ſhe takes it in her paws and preſents the breaſt to it, in the ſame manner that a woman would do to her child. There is no method of obtaining the young one, but by killing the mother; for ſhe never abandons it. When ſhe is killed, it falls from her, and may then be ſeized.

As they feed only on fruits, pot-herbs, grain, and ſome inſects, their fleſh is reckoned not bad eating. It reſembles mutton, or the fleſh of a hare. One of them is a meal to ſix perſons. They are the moſt common game, and the moſt agreeable to the taſte of the *Amazon Indians*; they roaſt one part, and boil the other: "We "lived upon them," ſays a certain writer *, "during "all the time we remained there; becauſe we could pro-"cure no other food; and the hunters ſupplied us daily, "with as many as we could eat. I went to ſee this "ſpecies

* Cermelin, Hiſt. des Avanturiers, tom. ii. p. 251.

" ſpecies of hunting, and was ſurpriſed at the ſagacity " of thoſe animals, not only in diſtinguiſhing particu- " larly thoſe who make war upon them, but alſo in de- " fending themſelves and providing for their own ſafety " when attacked. When we approached, they all aſ- " ſembled together, uttered loud and frightful cries, and " threw at us dried branches which they broke off from " the trees. I likewiſe remarked, that they never aban- " doned one another; that they leapt from tree to tree " with incredible agility; and that they flung themſelves " headlong from branch to branch, without ever falling " to the ground; becauſe, before reaching the earth, " they always caught hold of a branch, either with their " hands or tail; ſo that if not ſhot dead at once, they " could not be laid hold of; for, even when mortally " wounded, they remain fixed to the trees, where they " often die, and fall not off till corrupted. Fifteen or " ſixteen of them are frequently ſhot before three or " four of them can be obtained. What is ſingular, as " ſoon as one is wounded, the reſt collect about him, and " put their fingers into the wound, as if they meant to " ſound it; and when it diſcharges much blood, ſome of " them keep the wound ſhut, while others make a maſh " of leaves, and dexterouſly ſtop up the aperture. This " operation I have often obſerved with much admira- " tion." " After I have ſhot at one," ſays Dampier *, " and broke a leg or an arm, I have often pitied the " poor creature to ſee it look and handle the wounded " limb, and turn it about from ſide to ſide." When the ſavages ſhoot them with arrows, they extract the arrow out of their bodies with their own hands, like human creatures.

When

* Vol. ii. part 2, page 60.

When theſe creatures are embarraſſed, they aſſiſt each other in paſſing a brook, or in getting from one tree to another.

The partition of their noſtrils is very thick; and the apertures are rather placed at a ſide than under the noſe. This is the caſe with all the *American* monkies in general.

The Royal Monkey *,

A variety of the former ſpecies, which the *Indians* call the king of the monkies, is of a reddiſh bay colour, equally large and noiſy; the natives are particularly fond of its fleſh. *Europeans* too, eat it, when they have conquered the averſion to the bouilli of their heads, which look very like thoſe of little children. When ſcalded to get off the hair, it looks very white, and has a reſemblance ſhocking to humanity; that of a child of two or three years old, when crying. Had *Pythagoras* been along with *Dampier*, and others who have feaſted on thoſe creatures in *South America*, we ſhould not have wondered at his averſion to animal food.

XLIV.—*The Four-fingered Monkey* †.

This ſpecies is diſtinguiſhed by its four fingers, its hands being quite deſtitute of a thumb; but the feet have five toes with flat nails; its face is long and flat, of a ſwarthy fleſh-colour; its eyes are ſunk in the head; its ears like the human; its limbs are of great length, and

* Simia Seniculus of the Syſt. Nat. The Allouatte of the Tranſlator of Buffon.

† Simia Paniſcus of the Syſt. Nat. The Coaita of the Tranſlator of Buffon.

and remarkably ſlender; its body is alſo ſlender, about a foot and a half long; its tail is about two feet long, naked below, near the end, and ſo prenſile as to ſerve every purpoſe of a hand. It inhabits *Peru*, *Braſil*, *Guiana*, and the neighbourhood of *Carthagena*. They are the moſt active of monkies, and quite enliven the foreſts of *America*. In order to paſs from top to top of lofty trees, whoſe branches are too diſtant for a leap, they will form a chain, by hanging down, linked to each other by their tails, ſwinging in that manner, till the loweſt catches hold of a bough of the next tree, and draws up the reſt. Sometimes they paſs rivers by the ſame expedient.

They are ſometimes brought to *Europe*; but they are very tender, and ſeldom live long in our climate. On account of the length and ſlenderneſs of their legs and tail, they are ſometimes called *ſpider monkies*.

Unlike the preacher and royal monkey, they are of a mild and docile diſpoſition. They are diſtinguiſhed from the former alſo by the want of that oſſeous drum which they have in their throat, and with which they make ſuch a howling noiſe, as to procure themſelves the name of howlers, as well as that of preachers.

They are extraordinary fat at the dry ſeaſon, when the fruits are ripe. In the rainy ſeaſon they have great quantities of worms in their bowels. Some of theſe are ſeven or eight feet long.

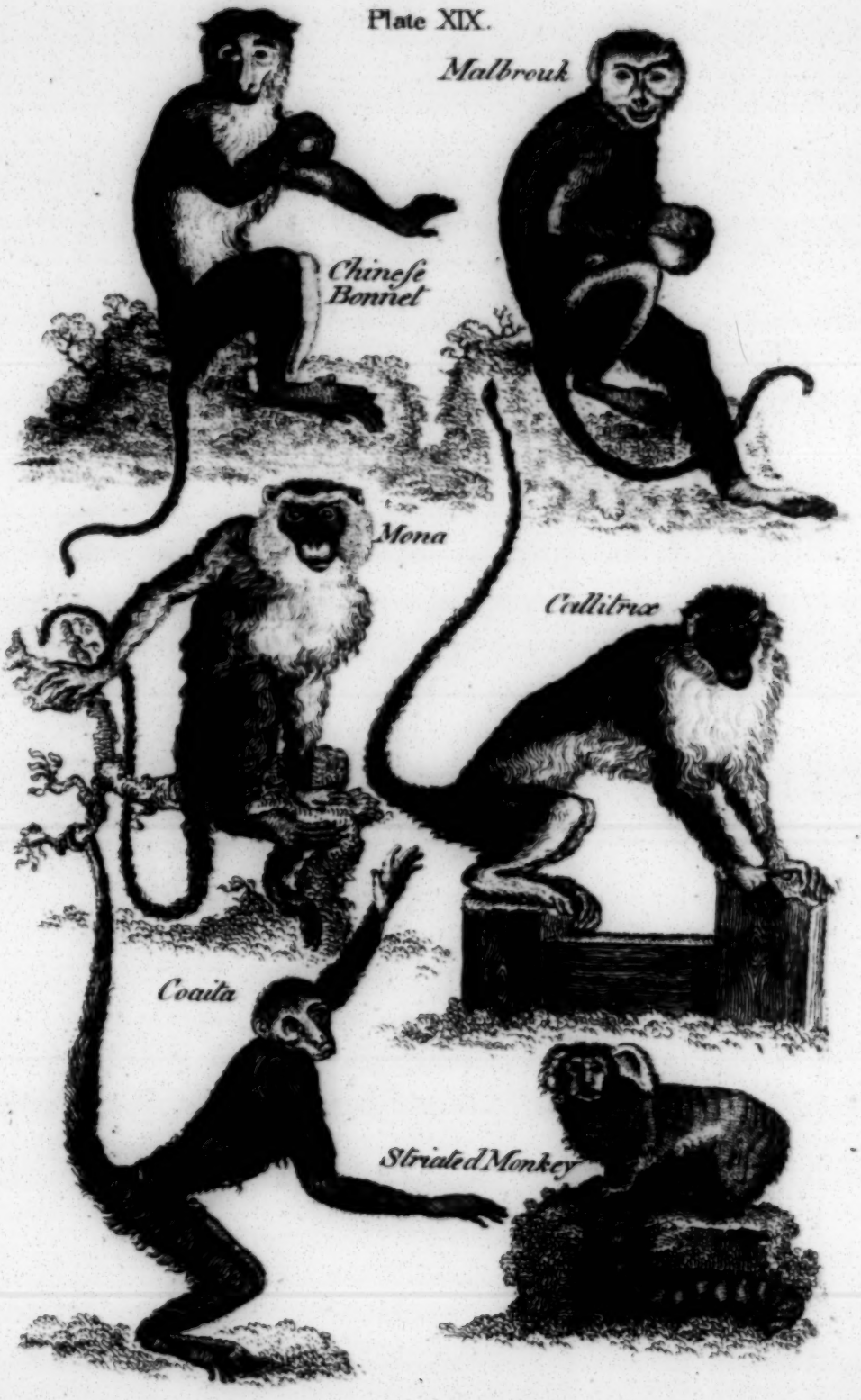
XLV.—*The Fearful* or *Timid Monkey* *.

THIS is a monkey with a round head and a ſhort fleſh-coloured face, with a little down on it; the hair on the forehead is more or leſs high in different ſubjects; the top of the head is covered with pretty long, black, or duſky hair, as are likewiſe the hind part of the neck and the middle of the back; the reſt of the body and the limbs are of a reddiſh brown; the hair on the breaſt and belly very thin; the hands and feet are covered with a black ſkin; the nails on its toes are flat; its tail is longer than the head and body, and is often carried over the ſhoulders; the hair upon it is of a deep brown colour, very long, and appears very buſhy from beginning to end.

It inhabits *Guiana;* is a lively ſpecies, but capricious in its affections in a ſtate of captivity, having a great fondneſs for ſome perſons, and as great an averſion to others; they are very agile, and their nimbleneſs and dexterity are extremely amuſing. Of all the ſapajous, their conſtitution ſeems to be the beſt adapted to our climate. If kept warm in a chamber during the winter, they live comfortably in *Europe* for ſeveral years. They have been known to produce in *France*, and were obſerved to be, like almoſt every other ſpecies of monkey, paſſionately fond of their young; the father and mother are wont to carry the young one alternately, and, when it does not hold properly, they give it a pretty ſevere bite. They are of a ſmall ſize; both head and body are not above a foot in length. From a certain ſingularity in their form, the female is frequently miſtaken for the male. They walk always on four feet.

* Simia Trepida of the Syſt. Nat. The Sajou of Buffon.

Plate XIX.


Malbrouk
Chineſe Bonnet
Mona
Callitrix
Coaita
Striated Monkey

XLVI.—*The Capuchin Monkey* *.

On the toes of this ſpecies there are crooked claws, not flat nails, as on thoſe of the former; but in every other particular, the two are ſo much alike, that this circumſtance ſeems to be the chief and only difference between them: and hence, *Buffon* ſeems, with no great impropriety, to have reckoned it only a variety of the former.

XLVII.—*The Weeper* †.

This monkey ſmells of muſk, is of a melancholy diſpoſition, makes a plaintive noiſe, and appears as if always weeping; yet he is much diſpoſed to imitate whatever he ſees done; his face is round and flat, of a reddiſh brown colour; on the upper part of his head and body, his hair, which is very long and thinly diſperſed, is black, tinged with brown; beneath, and on the limbs, it is tinged with red; the tail is black, and much longer than the head and body, which exceed not fourteen inches; he has a flat nail on each toe. Both old and young of this ſpecies are deformed. They inhabit *Surinam* and *Braſil*.

They keep in large companies, and make a great chattering, eſpecially in ſtormy weather, and reſide much on a ſpecies of tree which bears a podded fruit on which they feed. They are mild, docile, and timid.

Buffon mentions a variety with a white throat.

* Simia Capucina of the Syſt. Nat. The Capuchin of Buffon, which he reckons only a variety of the former.

† Simia Apella of the Syſt. Nat. The Sai or Weeper of the Tranſlator of Buffon.

XLVIII.—*The Orange Monkey* *.

THIS monkey is of the ſize of a ſquirrel, of a brilliant gold colour in *Braſil*, its native country; it ſmells of muſk too, is a very tender animal, and is ſeldom brought to *Europe* alive; it has a round head, a noſe a little pointed; and the tip of its noſe, and a circular ſpace round its mouth, black; its ears are hairy; the hair on its body is ſhort, woolly, and fine; in the faded ſtate in which it is ſeen in this country, of a yellow and brown colour; the nails on its hands are flat; thoſe on its feet like claws.

From the gracefulneſs of its movements, the ſmallneſs of its ſize, the brilliant colour of its hair, the largeneſs and vivacity of its eyes, it has uniformly been preferred to all the other ſapajous; it is indeed the moſt beautiful of this tribe. As the tail is leſs prenſile than that of the former ſpecies, it ſeems to form the ſhade between the ſapajous and ſagoins.

XLIX.—*The Horned Monkey* †.

THIS monkey has obtained the epithet horned, from two tufts of hair that ſtand up like horns on its head; its eyes are bright, but of a duſky colour; its ears are like thoſe of the human body; its face, ſides, belly, and forelegs, are of a reddiſh brown; the upper part of its arms, its neck, and the upper part of its back are yellowiſh; the

* Simia Sciurea of the Syſt. Nat. The Orange or Saimiri of the Tranſlator of Buffon.

† Simia Fatuellus of the Syſt. Nat.

the top of its head, the lower part of its back, its hind legs, and all its feet, are black; the body is about fourteen inches long; the tail about fifteen, prehenſile, and covered with ſhort bright hair.

It is a deformed and ugly ſpecies, and inhabits *America*.

L.—*The Antigua Monkey.*

THIS ſpecies has its name from an individual brought from *Antigua*, the property of *Richard Morris*, Eſq. of the Navy Office, *London*; it was very good natured, lively, and full of tricks, and frequently hung by its tail; its noſe was ſhort, its face black; the hair on each ſide long; the back and ſides were orange, and black intimately mixed; its belly white; the outſide of its legs black; the inſide aſh-coloured; the tail, of a duſky aſh-colour, twenty inches long; the body eighteen.

We now take leave of the ſapajous, or monkies with prehenſile tails, and proceed to deſcribe the ſagoins or monkies whoſe tails are ſtraight and not prehenſile.

LI.—*The Fox-tailed Monkey* *.

THIS ſpecies which inhabits *Guiana*, is about a foot and a half in length, from noſe to tail; its tail is longer, and like that of a fox; its face is ſwarthy, covered with a ſhort white down; its forehead, and the ſides of its face, are covered with pretty long whitiſh hair; its body with

* Simia Pithecia of the Syſt. Nat. The Fox-tailed or Saki of the Tranſlator of Buffon.

long duſky brown hair, white or yellowiſh at its points; the hair on its tail is very long and buſhy; ſometimes black, ſometimes reddiſh; its belly, and the lower part of its limbs, are of a reddiſh white.

LII.—*The Great-eared Monkey* *.

THIS is a beautiful animal, very lively, and eaſily tamed, but ſo delicate, that it cannot long reſiſt the inclemency of our climate. It inhabits the hotter parts of *South America*, and the iſle of *Gorgona* in the *South Sea*, ſouth of *Panama*.

It has a round head, a ſwarthy, fleſh-coloured, naked face; the upper lip a little divided; ears erect, very large, and almoſt ſquare; the hair on the forehead upright and long; that on the body ſoft, but ſhaggy; the head, body, and limbs black, except the lower part of the back, which is tinged with yellow; its hands and feet are covered with orange-coloured hair, very fine and ſmooth; its nails are long and crooked; its teeth very white; it is of the ſize of a ſquirrel; the tail is black, and twice the length of the body.

Dampier ſays, at low water they come to the ſea-ſide to take muſcles and perriwinkles, which they dig out of the ſhells with their claws.

* Simia Midas of the Syſt. Nat. The Tamarin or Great-eared Monkey of the Tranſlator of Buffon.

LIII.—*The Striated Monkey* *.

THIS ſpecies is of a ſmall ſize; its body is only ſeven inches long; its tail near eleven; it weighs only about ſix ounces, and ſome not more than four and a half; it inhabits *Braſil*, and feeds on vegetables; but will alſo eat fiſh; it has but a weak cry, from the ſound of which *Buffon* gives it the name of ouiſtiti; it is a very lively, reſtleſs, creature, and is often brought over to *Europe*; its head is very round; its ears are like the human; but are concealed in a front view of the animal, by two very long tufts of white hair ſtanding out on each ſide; the irides of its eyes are reddiſh; its face is almoſt naked, of a ſwarthy fleſh-colour, with a white ſpot above its noſe; the head black; the body aſh coloured, reddiſh, and duſky; the tail is full of hair, annulated with aſh-colour, and black, in alternate rings; its hands and feet are covered with ſhort hair; its fingers are like thoſe of a ſquirrel; its nails, or claws rather, are ſharp.

They have produced young in *Portugal*, where the climate is found favourable to them; and hence, it has been aſſerted, that they might be multiplied in the ſouthern parts of *Europe*.

* Simia Iacchus of the Syſt. Nat. The Ouiſtiti or Striated Monkey of the Tranſlator of Buffon.

LIV.—*The Silky Monkey* *.

THIS ſpecies inhabits *Guiana*, and is very gentle and lively; the length of its head and body is about ten inches; its tail thirteen and a half; a little buſhy at the end; its conſtitution ſeems to be more robuſt than moſt of the others, as one of them has been known to live five or ſix years in *France*, with the precaution only of keeping it within doors, in a warm room, in winter. The ſilky ſoftneſs of its coat has procured it the name here given it; and its colours are not without beauty; its flat face, hands, and feet, are of a dull purple colour; its ears round and naked; on the ſides of the face, the hairs are very long, and turned backwards; of a red or bright bay colour, ſometimes yellow, and the former colour only in patches; the hair on the body is alſo long, very fine, gloſſy, and of a light, but bright yellow; its fingers have claws inſtead of nails.

LV.—*The Red-tailed Monkey* †.

THIS monkey alſo inhabits *Guiana*, *Braſil*, and the banks of the river of *Amazons*, whoſe woods ſwarm with numberleſs ſpecies; it is agile and lively; has a ſoft whiſtling note, and often marches with its tail over its back like a little lion; it has a round head, and a black pointed face; its ears are round, of a duſky colour; on its head it has long white hair ſpreading over its ſhoulders; its

* Simia Roſalia of the Syſt. Nat. The Marikina of Buffon.

† Simia Oedipus of the Syſt. Nat. The Pinche or Red-tailed Monkey of the Tranſlator of Buffon.

its ſhoulders and back are covered with long looſe brown hair; the rump and half the tail are of a deep orange colour, almoſt red; the remaining part of the tail, as well as the throat, and inſides of the hands and feet, are black; its breaſt, belly, and legs, are white; its claws are crooked and ſharp; the length of the head and body is eight inches; the tail above ſixteen; though its figure and appearance be ſingular, it is a beautiful animal; its ſoft voice reſembles rather the chanting of a ſmall bird than the cry of a quadruped.

LVI.—*The Fair Monkey* *.

THIS is a rare ſpecies, but remarkable for the beauty of its hair, and the lively red that adorns its face, which, together with its ears, is of the moſt lively vermilion colour; its body is covered with moſt beautiful long hairs of a bright and ſilvery whiteneſs; its ſhape of matchleſs elegance; its tail of a ſhining dark cheſnut; its head and body are eight inches long; its tail twelve. It inhabits the banks of the river of *Amazons*, and was diſcovered by *M. de Condamine*, who brought one of them almoſt in ſight of the *French* coaſt; but it could no longer bear the inclemency of the climate, to which it then fell a victim.

Thus have we ſurveyed the different ſpecies of apes, baboons, and monkies, that are at preſent known. Notwithſtanding their number and variety, it is probable that there may be others not yet diſcovered. Some may think the detail tedious, unintereſting, and in ſome particulars perhaps

* The Mico or Fair Monkey of the Tranſlator of Buffon.

haps even diſguſting; yet the philoſophic mind will find a pleaſure in tracing the hiſtory of the different tribes of animated beings, which all, in their different forms, colours, and manners, manifeſt the power, wiſdom, and goodneſs of the great Creator,

" Who ſees with equal eye, as lord of all,
" A hero periſh, or a ſparrow fall." POPE.

2d Plate XIX



1. LORI 2. MONGOUS 3. MAUCAUCO 4. VARI

GENUS XVI.—*Maucauco.*

ANIMALS of this genus inhabit the eaſtern parts of *Africa*, *Madagaſcar*, *Ceylon*, and *Bengal*. Like the apes, they have feet formed like hands; they have a ſharp-pointed, fox-like viſage; ſix cutting teeth, and two canine teeth in each jaw.

I.—*The Tail-leſs Maucauco* *.

THIS ſpecies has the head and ears ſmall, a ſharp-pointed noſe, and its eyes ſurrounded with a white ſpace, encircled by a black ring; a dark brown line, forked on the forehead, is extended along the back to the rump; its body is covered with a ſhort, ſoft, and ſilky, aſh-coloured and reddiſh fur; its toes are naked, having flat nails; thoſe of the inner toe on each hind foot are long, crooked, and ſharp; the length of the animal from the noſe to the rump, is ſixteen inches. It inhabits *Ceylon* and *Bengal*; lives in the woods, and feeds on fruits; it is fond of eggs, and will greedily devour ſmall birds. With the inactivity of a *ſloth*, it creeps ſlowly along the ground; is very tenacious of its hold, and makes a plaintive noiſe. *Buffon* ſays, that of all animals, it is the longeſt in proportion to its bulk, and has ſeveral ſingularities in its conformation. One is, that it has nine lumbar vertebrae, whilſt all other quadrupeds have five, ſix, or ſeven. Another, that the male and female, in certain

* Lemur Tardigradus of the Syſt. Nat.

parts, have the moſt perfect reſemblance. *Linnæus* informs us, that it is ſlow in its pace, but very quick in its hearing.

II.—*The Loris.*

THIS maucauco has a long dog-like viſage, high forehead, ears large, thin, and rounded; a body ſlender and weak; its limbs very long and ſlender; on the interior toe of every foot, a crooked claw, and flat nails on the reſt; the thumb on each foot, ſeparate, and diſtinct from the toes; it has no tail any more than the former; the hair on its body is univerſally ſhort, and delicately ſoft; on the upper parts tawny, beneath whitiſh; on its head there is a dart-ſhaped ſpot, with the end pointing to the interval between its eyes, which are ſurrounded with a duſky ſpace.

The length of the animal, meaſured from the tip of the noſe, is only eight inches; it differs totally in form and in nature from the preceding, though *Buffon* ſeems to confound the two ſpecies in his deſcription of the Loris. This is very active, aſcends trees moſt nimbly, and has the actions of an ape. If we may credit *Seba*, the male climbs the trees, and taſtes the fruits before it preſents them to its mate.

This ſpecies will agree to *Thevenot's* deſcription. I ſaw in the *Mogul's* country, ſays he, apes which had been brought from *Ceylon*. They were much eſteemed, becauſe they exceeded not the ſize of a man's hand, and were of an uncommon ſpecies. When I examined them, they ſtood on their hind feet, often embraced each other, and looked ſteadfaſtly at people without being afraid.

III.—*The Woolly Maucauco* *.

This creature, of the ſize of a cat, has its eyes lodged in a circle of black, and the ſpace between them of the ſame colour; the irides of its eyes of an orange colour; ſhort round ears; the end of the noſe black; the reſt of the noſe, and the lower ſides of its cheeks, white. When in full health, the whole upper part of the body is covered with long ſoft and thick fur, a little curled or waved, of a deep browniſh aſh-colour; its tail is very long, and covered with the ſame ſort of hair of the ſame colour; its breaſt and belly are white; the hands and feet naked and duſky; the nails, as in the two former ſpecies, flat; except that of the inner toe of the hind feet; it varies ſometimes, with white or yellow paws, and a face wholly brown.

It inhabits *Madagaſcar* and the adjacent iſles; turns its tail over its head to protect it from rain; feeds on fruits, and ſleeps on trees; it is very good natured, and very ſportive; but very tender; it is found as far as *Celebes* or *Macaſſar*.

Buffon gives the hiſtory of one that he had in his poſſeſſion for ſeveral years. He ſays, that its tongue was rough like that of a cat; that when permitted, it would continue licking a perſon's hand till it was inflamed, and often finiſhed this operation with a ſevere bite. It amuſed itſelf with gnawing its own tail, and actually deſtroyed four or five vertebrae. Whenever he could eſcape, he went into the neighbouring ſhops in queſt of

* Lemur Mongooz of the Syſt. Nat. The Mongous of the Tranſlator of Buffon.

fruits, ſugar, and ſweet-meats, opened the boxes that contained them, and helped himſelf. He dreaded cold and moiſture; in cold weather he never left the fire, and would ſtand on end to warm himſelf. His movements were extremely briſk, and ſometimes petulant. He often ſlept during the day; but his ſlumbers were ſo light, that the ſmalleſt noiſe awaked him.

IV.—*The Ring-tail* *.

THIS, ſays the *Count de Buffon*, is a beautiful animal; his aſpect is agreeable; his figure elegant, and his hair always neat and gloſſy; he is remarkable for the largeneſs of his eyes; for the height of his hind legs, which are much longer than thoſe before; and for his large and beautiful tail, which is always erect, always in motion, and garniſhed with thirty alternate rings of black and white, well marked and ſeparated from each other; his manners are gentle; and though he bears great reſemblance to the monkies, he poſſeſſes none of their malicious diſpoſitions. In a ſtate of liberty, this ſpecies live in ſociety, and are found in *Madagaſcar* in troops of thirty or forty. In a domeſtic ſtate, the prodigious rapidity of their movements renders them incommodious: It is for this reaſon they are generally chained; for, though extremely active and vivacious, they are neither miſchievous nor ferocious; they tame to ſuch a degree, as to go out and return without any danger of running off. Their gait is oblique like that of all animals that have hands inſtead of feet. They leap more gracefully than they walk, are rather ſilent, uttering only a ſhort acute

* Lemur Catta of the Syſt. Nat. The Ring-tail of the Tranſlator of Buffon.

acute cry when ſurpriſed or irritated; they ſleep in a ſitting poſture, with the head reſting on the breaſt; their body is longer, but not thicker, than that of a cat; but the height of their legs gives them an appearance of being larger than they really are; their hair, though ſoft to the touch, ſtands always erect.

But to give a more accurate deſcription of the animal: It has the point of its noſe black, with black circles round its eyes; the reſt of its face is white; and its ears ſtand erect; the hair on the top of its head, on the hind part, is of a deep aſh colour; the back and ſides of a reddiſh aſh colour; the outſides of the limbs are paler; its belly and the inſide of the limbs are white; all its hair is very ſoft, cloſe, and fine; erect like the pile of velvet; its tail, which is twice the length of the body, is marked, as before obſerved, with regular rings of black and white; when the animal ſits, it is twiſted round its body, and brought over its head; its nails are flat, particularly thoſe of the thumbs of the hind feet; the inſide parts of the hands and feet are black. In addition to its other agreeable qualities, it is a very cleanly creature.

V.—*The Ruffed Maucauco* *.

In this creature, the irides of the eyes are of a deep orange colour; it has long hair round the ſides of the head, ſtanding out like a ruff, from which it has obtained its name; the colour of the whole animal is black; but not always, being ſometimes found white ſpotted with black; but having always black feet; it is rather larger than the laſt ſpecies; it is very fierce in a wild ſtate,

* Lemur Caudatus Niger of the Syſt. Nat. The Vari of Buffon.

ſtate, and makes ſo violent a noiſe in the woods, that it is eaſy to miſtake the noiſe of two for that of an hundred; ſome have compared the noiſe it makes, to the roaring of a little lion. When taken young, and tamed, they are very gentle and good natured; their hind legs and thighs, like thoſe of the two preceding ſpecies, are very long, which makes their pace ſideling and bounding. Theſe three ſpecies ſeem to be confined to *Madagaſcar*, *Moſambique*, and the lands adjacent to thoſe iſlands.

VI.—*The Tarſier.*

THE *Count de Buffon* joins this ſpecies with the woolly jerboa, though, at the ſame time, he is particularly careful to point out their ſpecific difference. Mr. *Pennant* has deſcribed it, from two ſpecimens in the cabinet of Dr. *Hunter*; but enters it as an exception from the genus with which he has claſſed it, on account of its having in each jaw, only two cutting and two canine teeth; its name is derived from that part of the foot called the *tarſus*, the bones of which are prodigiouſly long in proportion to the ſize of the animal, which is no bigger than a middling rat; its length from noſe to tail is near ſix inches, to the hind toes eleven and a half; its tail nine inches and a half. Thoſe that wiſh to be thought witty, may ſmile perhaps at our preciſion in meaſuring the heads and tails of ſuch diminutive, and apparently uſeleſs animals; but thoſe who wiſh to acquire any knowledge in natural hiſtory, will hear with patience the tedious detail, ſince without accuracy of deſcription the mind could form no diſtinct idea of creatures that readers in general have no opportunity of ſeeing. The tarſier,

called

called by the *Macaſſars*, Podje, has a pointed viſage, a ſlender noſe ending in two lobes; eyes large and prominent; ears erect, broad, naked, and ſemi-tranſparent, an inch and a half long; between them, on the top of the head, it has a tuft of long hairs; four long ſlender toes, and a diſtinct thumb on each foot, with ſharp-pointed claws; the thumbs of the hind feet are broad, and greatly dilated at their ends; the hairs on the legs and feet are ſhort, white, and thin; the tail is almoſt naked; the greater part of it is round and ſcaly, like that of a rat; but grows hairy toward the end, which is tufted; the hair on its body is ſoft, but not curled, of an aſh colour mixed with tawny; its penis is pendulous; its ſcrotum and teſticles are of vaſt ſize in proportion to the animal.

It inhabits the remoteſt iſlands of *India*, eſpecially *Amboina*.

VII.—*The Little Maucauco.*

THIS ſeems to be the ſame animal which *Buffon* calls the *Madagaſcar* rat. It is ſuppoſed to live in the palm-trees, and to feed on fruits; it eats, holding its food in its fore feet, like the ſquirrels; is lively, has a weak cry, and rolls itſelf up when it ſleeps; it is rather leſs than the black rat; it has a dark ſpace round its eyes, which are very large and full; the upper parts of its body are aſh-coloured, the lower white; its head is round, noſe ſharp, and whiſkers long; it has two canine teeth in each jaw; four cutting teeth in the upper jaw; ſix in the lower, and ſeven grinders on each ſide; its ears are large, roundiſh, naked, and membranaceous; its toes are long, but of unequal lengths; the nails round, and very ſhort; its tail is as long as the body, and is prehenſile.

VIII.—*The Flying Maucauco* *.

THIS extraordinary creature, near three feet long, and as broad, a ſpecies very diſtinct from the bat and flying ſquirrel, inhabits the country about *Guzarat*, the *Molucca* iſles, and the *Philippines;* it feeds on the fruits of trees, and is called by the *Indians*, Caguang, Colugo, and Gigua; its head is long; its mouth and teeth are ſmall; its ears are alſo ſmall, round, and membranous; from the neck to the hands, and thence to the hind feet, extends a broad ſkin like that of a flying ſquirrel; the ſame is alſo continued from the hind feet to the tip of the tail, which is alſo included in it; the body and outſide of the ſkin is covered with ſoft hair, hoary or black, and aſh-colour; the inner ſide of the extended ſkin appears membranous, with little veins and fibres diſperſed through it; the legs are clothed with a ſoft yellow down; it has five claws on each foot; the claws ſlender, very ſharp, and crooked; with theſe it ſtrongly adheres to whatever it faſtens on; its tail is ſlender, and about a ſpan long. From our ignorance of the form of its teeth, its genus is very doubtful; but it is placed here on the authority of the great *Linnæus*, and concludes the firſt ſection of the claſs of digitated quadrupeds.

* Lemur Volans of the Syſt. Nat.

DIVISION II.

SECT. II. *Digitated Quadrupeds.*

THE ſecond SECTION of this diviſion ſhall comprehend the various genera of rapacious, carnivorous, digitated quadrupeds, and their ſubordinate ſpecies that have *canine* teeth: It is with propriety therefore that we place in front,

GENUS XVII.—*The Dog.*

THE diſtinctive characters of this genus are, ſix cutting teeth, and two *canine*, in each jaw; a long viſage, five toes before, and four behind; this laſt characteriſtic is invariable in the wild ſpecies, ſuch as the wolf, &c. in the common dogs, oft times there are five toes on each foot. The firſt ſpecies, with its varieties, contains all thoſe animals which, in common converſation, we diſtinguiſh by the name of dogs. This ſpecies Mr. *Pennant* has marked with the well-merited epithet *faithful.*

I.—*The Faithful Dog.*

LINNAEUS, that great naturaliſt, and accurate obſerver, was the firſt who remarked that the tail of this animal bends towards the left; a character common to the whole ſpecies, in all its varieties.

It is to this ſpecies we are to apply all the fine things that have ever been ſaid or written about dogs. As their

hiſtory has been delineated with all that fidelity, preciſion, and elegant conciſeneſs which render the writings of *Linnæus* an ineſtimable treaſure, we ſhall avail ourſelves of his deſcription. "The dog, the moſt faithful of animals, the companion of mankind, fawns at the approach of his maſter, and will not ſuffer any one to ſtrike him; runs before him in a journey, paſſing frequently backward and forward over the ſame ground. On coming to croſs-ways, he ſtops and looks back; is very docile; will find out what has been dropt; is watchful by night; announces the coming of ſtrangers, and guards any goods committed to his charge: he drives the cattle home from the field; keeps herds and flocks within bounds, and protects them from wild beaſts. By virtue of his acute ſenſe of ſmelling, he points out the game to the ſportſman, and brings the birds that are ſhot to his maſter. At *Bruſſels*, and in *Holland*, he draws little carts to the herb market: In *Siberia*, he draws a ſledge, with his maſter in it, or one loaded with proviſions; he will turn a ſpit; ſits up, and begs at table; when he has committed a theft, he ſlinks away with his tail between his legs; eats enviouſly with oblique eyes; ſtrives to be maſter among his fellows at home; is an enemy to beggars, and attacks ſtrangers without provocation: he is fond of licking wounds, aſſuages the pain of the gout, and of cancerous ulcers; howls at certain notes in muſic, and often urines on hearing them: he bites at a ſtone flung at him; is ſick at the approach of bad weather; gives himſelf a vomit, by eating graſs; is afflicted with tape worms; ſpreads his madneſs; grows deaf and blind with age, *et ſæpe gonorhœa infectus*: he eats fleſh, carrion and farinaceous vegetables, but not greens; drinks by lapping, is fond

"

" of rolling on carrion, ſheep's dung, &c.; his ſcent is " exquiſite: he goes obliquely, foams and hangs out his " tongue when hot, but ſcarcely ever ſweats; about to " lie down, he goes often round; his ſleep is attended " with a quick ſenſe of hearing; and during ſleep he " frequently dreams; he makes water ſide-ways with " his leg up; is very apt often to repeat it, where an- " other has done the ſame, and dungs upon a ſtone; his " dung is the greateſt of ſceptics. *Canis odorat anum al-* " *terius; menſtruans catullit cum variis; moràet illa il-* " *los; cohæret copula junctus.* The female goes ſixty- " three days with young, brings forth from four to ten; " the males like the dog, the females like herſelf *; " the largeſt and talleſt are more prolific than the ſmaller " kinds: though driven as unclean from the houſes of " the *Mahometans*, yet the ſame people eſtabliſh hoſpi- " tals for dogs, and allow them a daily portion of food."

No leſs juſt and elegant, though more diffuſe, is the following extract from *Buffon*.

" The dog, independent of the beauty of his figure, " his ſtrength, vivacity, and nimbleneſs, poſſeſſes every " internal excellence which in a brute can attract the re- " gard of man. A paſſionate, and even a ferocious and " ſanguinary temper, renders the wild dog formidable to " all animals; but in the domeſtic dog, theſe hoſtile diſ- " poſitions vaniſh, and are ſucceeded by the ſofter ſenti- " ments of attachment, and the deſire of pleaſing; he " runs with cheerfulneſs and alacrity to his maſter's foot, " where he lays down his courage, his ſtrength, and his " talents: he attends for orders, which he is always ſo- " licitous to execute: he conſults, he interrogates, he

* The ſimilarity of the offspring to the male or female according to their ſex, reſts ſolely on the authority of Linnæus; but if fact and obſervation are againſt it, even that great name will not ſupport the opinion.

" ſupplicates his maſter; a ſingle glance of the eye is
" ſufficient, for he knows the external ſigns of our in-
" tentions and wiſhes: his feelings are extremely deli-
" cate, and he has more fidelity and ſteadineſs in his af-
" fections than man: he is not corrupted by ambition,
" rarely by intereſted views, or by a deſire of revenge;
" and he has no fear but that of diſpleaſing: he is all
" zeal, ardour, and obedience; more apt to recal bene-
" fits than outrages: he is not diſcouraged by blows or
" bad treatment, but calmly ſuffers, and ſoon forgets
" them; or he remembers them only to increaſe his at-
" tachment: inſtead of flying, or diſcovering marks of
" reſentment, he expoſes himſelf to torture, and licks
" the hand from which he received the blow; to the
" cruelty of his maſter, he only oppoſes complaint, pa-
" tience, and ſubmiſſion: ſurely the maſter muſt be void
" of humanity that can abuſe ſuch a ſervant. Equally
" furious againſt thieves as againſt rapacious animals, he
" attacks and wounds them, and forces them from what-
" ever they have been attempting to carry off: But, con-
" tented with victory, he lies down upon the ſpoil, and
" will not touch it even to ſatisfy his appetite, exhibit-
" ing at the ſame time, an example of courage, tem-
" perance, and fidelity: he reigns at the head of a flock,
" and is better heard than the voice of the ſhepherd;
" ſafety, order, and diſcipline, are the fruits of his vi-
" gilance and activity; ſheep and cattle are a people ſub-
" jected to his management, whom he prudently con-
" ducts and protects, and never employs force againſt
" them, but for the preſervation of peace and good or-
" der.

" But in war againſt his enemies, or wild animals,
" he makes a full diſplay of his courage and intelli-
" gence; he ſhares with his maſter the pleaſure and fa-

" tigue

" tigue of the chace; here too his natural and acquired " talents are united and exerted; by the acuteneſs of his " ſcent, he unravels all the windings of the labyrinth, " all the falſe routs which were intended to deceive him; " and inſtead of abandoning the object of his purſuit for " a different animal, he redoubles his ardour, he over- " takes, attacks, ſlays, and extinguiſhes his thirſt and " his rage in the blood of the victim.

" The lion and the tiger, whoſe ſtrength is ſo great as " to enſure them of victory, hunt alone, and without ar- " tifice. Wolves, foxes, and wild dogs, hunt in packs, " aſſiſt each other with much art, and mutually ſhare in " the prey. When the natural talents of the dog have " been improved by education; when he has learned to " repreſs his ardour, and to regulate his movements, he " then hunts artificially, and is almoſt always certain of " ſucceſs.

" The predominant attachment of the whole race of " dogs towards mankind, prevents theſe animals from " ſeparating themſelves from us, till deſerted, or, by " ſome accident, left in places where there was no " poſſibility of reunion: As before obſerved, it ſeems " beyond the power of ill uſage to ſubdue the faithful " and conſtant qualities inherent in them. They are " found in great numbers wild, or rather without ma- " ſters, in *Congo*, *Lower Æthiopia*, and towards the *Cape* " *of Good Hope*. Thoſe are red-haired; have ſlender bo- " dies and turned up tails like greyhounds; others re- " ſemble hounds, and are of various colours, have erect " ears, and are of the ſize of a large fox-hound: they " run very ſwiftly, deſtroy cattle, hunt down antelopes, " as our dogs do the ſtag, and are very deſtructive to the " animals of chace: they have no certain reſidence, and " are very ſeldom killed, being ſo crafty as to ſhun all

" traps;

" traps; and of ſo ſagacious noſes as to ſhun every thing " that has been touched by man: they go in great packs; " attack lions, tigers, and elephants, but are often kill- " ed by them: the fight of theſe dogs is pleaſing to tra- " vellers, who ſuppoſe that they have conquered the " wild beaſts, and rendered their journey ſecure, by driv- " ing them away: they ſometimes attack the ſheep of " the *Hottentots*, and commit great ravages among them. " There are alſo multitudes of wild dogs in *South Ame-* " *rica*, derived from thoſe carried over, and left there, by " the *European* diſcoverers of that continent: they breed " in holes like rabbit-holes: when found young, they " inſtantly attach themſelves to mankind, and will never " afterward join the wild dogs, or deſert their maſters: " they have not forgot to bark, as ſome have alleged: " they have the look of a greyhound: their ears ſtand " erect: they are very vigilant, and excellent in the " chace."

The dog was quite unknown in *America*, before it was introduced there by the *Europeans*. The *alco* of the *Peruvians*, a little animal which they were ſo fond of, and kept as a lap dog, is too ſlightly mentioned by *Acoſta*, for us to determine what it was. But it is certain that the dog of *North America*, or rather the ſubſtitute the natives had for a dog, on its diſcovery by the *Engliſh*, was derived from the wolf, tamed and domeſticated; theſe ſubſtitutes cannot bark, but betray their ſavage deſcent by a ſort of howl: that wolfiſh breed want the ſagacity of a true dog, and are deteſted by *European* dogs, who worry them on all occaſions, retaining ſtill that diſlike, which it is well known all dogs have to the wolf: they are commonly white, have ſharp noſes and upright ears.

The

The dog is ſubject to more varieties than any other animal. While a ſuperficial obſerver would be ready to pronounce each of theſe varieties a diſtinct and ſeparate ſpecies, each will mix with the other, and produce varieties ſtill more unlike the original ſtock.

Pennant ſays, that the original ſtock of dogs in the old world is, with great reaſon, ſuppoſed to be the *ſchakal* or *jackal;* that from their tamed offſpring, caſually croſſed with the *wolf*, the *fox*, and even the *hyæna*, have ariſen the numberleſs forms and ſizes of the canine race. Before him, *Buffon*, with much ingenuity, had traced out a genealogical table of all the known dogs, deducing all the other varieties from the ſhepherd's dog, variouſly affected by climate, and other caſual circumſtances. This variety in *Britain* is ſmall and weak; but in *France*, and among the mountains of the *Alps*, large and ſtrong, and is ſometimes called the wolf dog. We ſhall give it the preference as the firſt variety, and arrange under it, its neareſt allies as ſubordinate varieties.



1. *Shepherd's Dog* *.

The characters of this variety are, that they are ſharp-noſed, erect and ſharp-eared; very hairy, eſpecially about the neck, and have their tails turned up or curled; they are naturally the moſt ſenſible: they become, without diſcipline, almoſt inſtantly, the guardians of the flocks: they keep them within bounds, reduce the ſtragglers to their proper limits, and defend them from the attacks of the foxes and of the wolves. In temperate climates, they are very numerous, though greater attention has been paid to the rearing of more beautiful kinds, than to the preſervation

* Canis domeſticus of the Syſt. Nat.

preſervation of this race, which has no recommendation but its utility, and for that reaſon has been abandoned to the care of the ſheep farmers. Notwithſtanding their inelegance, and melancholy aſpect, they are ſuperior, in inſtinct, to all others: they are of a decided character, independent of education, though, no doubt, that improves them: guided ſolely by their natural powers, they apply themſelves, as it were ſpontaneouſly, to the keeping of flocks; an employment which they execute with amazing fidelity, vigilance, and aſſiduity: their talents at the ſame time aſtoniſh and give repoſe to their maſters, while other dogs require the moſt laborious inſtruction to train them to the purpoſes for which they are deſtined.

The firſt ſubordinate variety of the ſhepherd's dog is,

1. The Pomeranian Dog, Le Chien Loup or Wolf Dog of *Buffon*. *Linnæus* deſcribes it as having longer hair on its head, erect ears, and its tail very much curled. The ſecond,

2. The Siberian Dog, a variety of the former, very common in *Ruſſia*. The other varieties in the inland parts of the *Ruſſian* empire and *Siberia*, are chiefly from the ſhepherd's dog; and there is a high limbed taper-bodied kind, the common dog of the *Calmuc* and independent *Tartars*, excellent for the chace, and all other uſes.

Plate XXI.

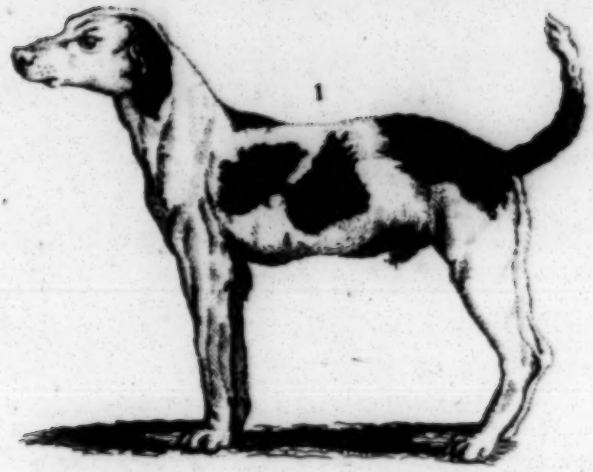


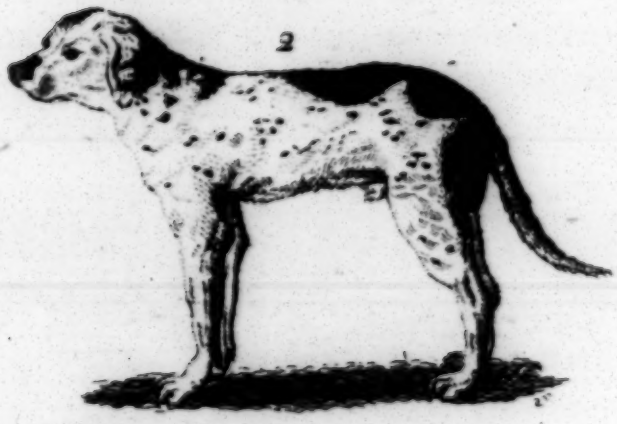


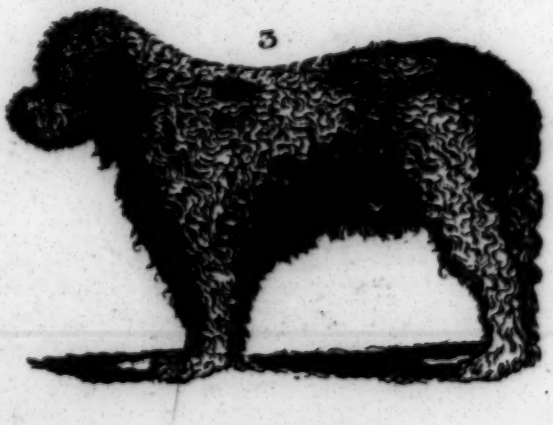


1. SHEPHERD'S DOG 2. SIBERIAN DOG 3. WOLF DOG

Plate XXII.







1. HOUND 2. HARRIER 3. WATER DOG

II. *The Hound* *.

This variety is a dog with long, ſmooth, and pendulous ears. It is the Canis Gallicus of *Linnæus*, the ſame with the blood-hound of the *Britiſh Zoology*, and is the head of the other kinds with ſmooth and hanging ears.

The ſubordinate variations of this variety are,

1. The Harrier;

2. The Dalmatian Dog, or Harrier of Bengal, a beautiful ſpotted kind, vulgarly called the Daniſh Dog:

3. The Turnſpit with bent or ſtraight legs; and,

4. The Water Dog, Great and Small, the *Canis Avicularius Aquaticus* of Ray, well known and exceedingly ſerviceable to the ſportſman.

The hounds, the harriers, the ſpaniels, the terriers, and the water dogs, are the true hunting dogs.

From No. II. branches out another race of dogs, with pendent ears covered with long hair, and leſs in ſize, which forms a third variety, *viz.*

III. *The Spaniel* †.

Dogs of this variety vary in ſize, from the ſetting dog to the ſpringing ſpaniels, and ſome of the little lap dogs, ſuch as,

1. King *Charles's*, ſo named from *Charles* II. who was very fond of this kind, and was always attended by ſeveral of them whenever he went out. This is the Gredin of *Buffon*; it is black, and has its palate alſo black.

* Canis Sagax of the Syſt. Nat. Le Chien Courant of Buffon.

† The Canis Avicularius of Linnæus.

2. The Pyrame. There is no *Engliſh* name for this kind: it is *Le Pryame* of *Buffon;* generally black, marked on the legs with red, and above each eye, with a ſpot of the ſame colour, and is a very playful creature.

3. Shock, the *Malteſe* Dog, with very ſoft, ſilky, long hair; and,

4. The Lion Dog, with ſhorter hair towards its loins, its belly and tail, except the point of the tail, which is tufted.

IV. The fourth variety conſiſts of dogs with ſhort pendent ears; long legs and bodies. Of this kind are,

1. The *Iriſh* Greyhound, a variety once very common in *Ireland*, and uſed in the chace of the wolf, but now very ſcarce. This is a dog of great ſize and ſtrength; it is *Le Matin* of *Buffon*, and the *Canis Graius Hibernicus* of Ray.

2. The Common Greyhound; this is the *Levrier* of *Buffon*, and the *Canis Graius* of *Linnæus*, a creature ſo well known, that any deſcription of it would be unneceſſary. Every one that has ſeen it, muſt admire the elegance and beauty of its form. Its *German* name of Windſpiel, indicates its ſwiftneſs; its *French* name of Harehound, its uſe; and its *Engliſh* name, though corrupted, announces its *Grecian* original. There are two varieties of it.

1. The *Italian* Greyhound, ſmall, and ſmooth; and,

2. The *Oriental*, tall, ſlender, with very pendulous ears, and very long hair on the tail hanging down a great length.

3. The *Daniſh* Dog. This is the largeſt of dogs, and is of a ſtronger make than the greyhound. *Buffon* mentions his having ſeen only one of theſe; that when ſitting,

ing, was about five feet high. Such perhaps were the dogs of *Epirus* mentioned by *Ariſtotle*, and thoſe of *Albania*, the modern *Schirwan*, or *Eaſt Georgia*, ſo beautifully deſcribed by *Pliny* *.

* Indiam petenti Alexandro Magno, rex Albaniæ dono dederat inuſitatæ magnitudinis unum (ſcil. canem) cujus ſpecie delectatus, juſſit urſos, mox apros, et deinde damas emitti contemptu immobili jacenti. Eaque ſegnitie tanti corporis offenſus Imperator generoſi ſpiritus, eum interimi juſſit. Nuntiavit hoc Fama Regi. Itaque alterum mittens, addidit mandata, ne in parvis experiri vellet, ſed in leone, elephantove. Duos ſibi fuiſſe: hoc interempto, præterea nullum fore. Nec diſtulit Alexander, leonemque fractum protinus vidit. Poſtea elephantum juſſit induci, haud alio magis ſpectaculo lætatus. Horrentibus quippe per totum corpus villis, ingenti primum latratu intonuit. Mox ingruit aſſultans, contraque belluam exſurgens hinc et illinc, artifici dimicatione, qua maxime opus eſſet, infeſtans atque evitans, donec aſſidua rotarum vertigine, afflixit, ad caſum ejus tellure concuſſa. Lib. viii. c. 40.

A tranſlation muſt fall vaſtly ſhort of the beauty of the original; but we ſubjoin one for the ſake of ſuch readers as would rather ſee the ſtory in Engliſh.

While Alexander the Great was on his march to India, the king of Albania ſent him one (viz. a dog) of unuſual bigneſs in a preſent. Delighted with his appearance, he ordered bears, then wild boars, and laſt of all, deer, to be turned out looſe before him. The dog, through contempt of ſuch game, lay ſtill without ſeeming to take the leaſt notice of them. That high ſpirited prince, provoked at ſuch indolence in a creature of ſuch ſize, ordered him to be put to death. Fame carried the news to the king. Therefore ſending him a ſecond, he added this meſſage, that he ſhould not wiſh to try him on ſmall beaſts, but on a lion or an elephant; that he had had only two; that if this were ſlain, he ſhould have none left. Alexander did not delay, and ſoon ſaw a lion quite overpowered. Then he ordered an elephant to be brought, and was never more entertained with any ſight. Briſtling up all his hair over his whole body, he opened upon him with a bark like a peal of thunder. Inſtantly he begins the attack, riſing againſt the elephant, now on this ſide, now on that, with artful combat, attacking or retreating, as he ſaw it neceſſary, till, by continually wheeling round, he at laſt brought him to the ground, the earth being greatly ſhaken all around by his weighty fall.

To this head may alſo be referred, perhaps, the vaſt dogs of *Thibet*, ſaid by *Marco Polo* to be as big as aſſes, and uſed in that country to take wild beaſts, and eſpecially the wild oxen called *Beyamini*.

Another kind belonging to this variety is,

4. The Maſtiff; a dog very ſtrong and thick made, with a large head and great lips hanging down on each ſide; he has a fine and noble countenance, and grows to a great ſize. This is the *Canis Moloſſus* of *Linnæus*.

Nam, qualis aut Moloſſus, aut fulvus Lacon,
Amica vis paſtoribus,
Agam per altas aure ſublata nives
Quæcunque præcedet fera. HOR.

v. The fifth variety conſiſts of dogs with ſhort pendent ears, ſhort compact bodies, ſhort noſes, and generally long legs. At the head of this claſs ſtands,

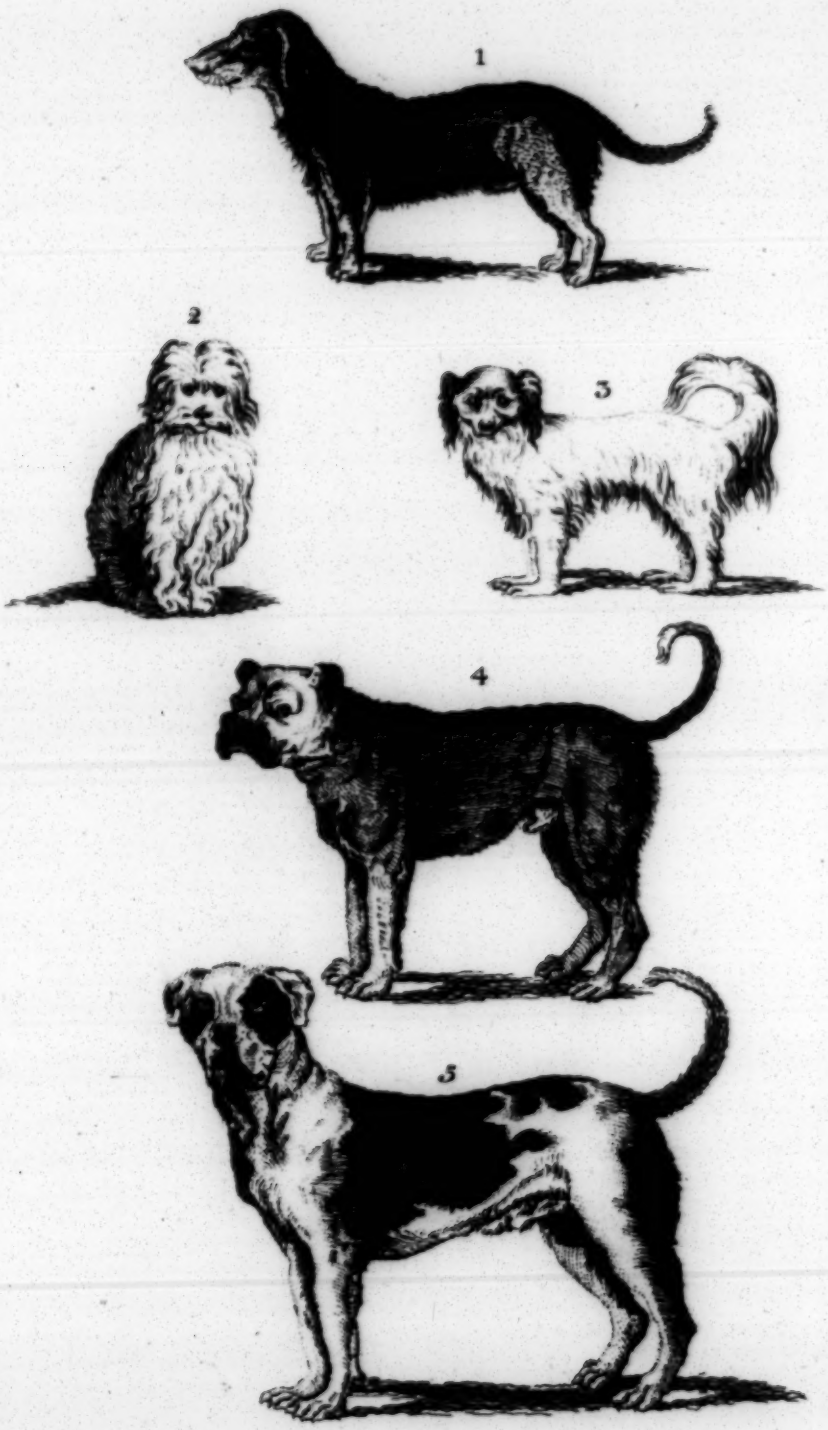
1. The Bull Dog, a breed peculiar to *England*, and leſs frequently to be met with even there, ſince the barbarous cuſtom of bull-baiting has declined; he is cruel and fierce, often biting before he barks, and is eaſily diſtinguiſhed by his ſhort noſe, and by the under jaw being longer than the upper. *Buffon* calls him *Le Dogue*.

2. The Pug Dog is a ſmall ſpecies, an innocent reſemblance of the laſt, and is marked by *Buffon* with the name of *Le Doguin*.

3. The Baſtard Pug, nearly allied to the former, he calls *Le Roquet*. Theſe dogs have very ſhort muzzles, little ſcent, and often ſend forth a diſagreeable ſmell.

4. The *Naked Dog*, by *Buffon* called the *Turkiſh* dog, is a degenerate ſpecies, with a naked body, having loſt its hair by the heat of the climate.

Plate XXIII



TURNSPIT 2.SHOCK 3. SPANIEL 4.BULL DOG 5.MASTIFF

It is only in temperate climates that dogs preſerve their ardour, courage, ſagacity, and other talents. When tranſported to very hot countries, they loſe thoſe qualities for which we admire them; but come to be in great requeſt for the table, a roaſted dog being the moſt luxurious feaſt to a negro; and the ſavages of *Canada* are equally fond of them. The *Greenlanders* alſo eat dogs fleſh, and make garments of their ſkins. Dire neceſſity perhaps firſt taught them the uſe of ſuch unnatural food.

Dogs of the South Sea Iſlands.

Theſe, brought originally from *New Guinea*, which the natives of the *South Sea* iſlands call the mother of lands, are found in the *Society Iſlands*, *New Zealand*, and the *Low Iſlands:* there are alſo a few in *New Holland*.

Of theſe there are two varieties.

1. The *firſt* reſembling the ſhort-noſed prick-ear'd ſhepherd's cur. Thoſe of *New Zealand* are of the largeſt ſort. In the *Society Iſlands* they are the common food, and are fattened with vegetables, which the natives cram down their throats when they will voluntarily eat no more. They are killed by ſtrangling, and the extravaſated blood is preſerved in *Cocoa* nut ſhells, and baked for the table. They grow very fat, and are allowed, even by *Europeans* who have got over their prejudices, to be very ſweet and palatable.

But the taſte for the fleſh of theſe animals was not confined to the Iſlanders of the *Pacific Ocean*. The ancients reckoned a young and fat dog excellent food, eſpecially if it had been caſtrated. *Hippocrates* placed it on a footing with mutton and pork; and in another place ſays, that the fleſh of a grown dog is wholeſome and ſtrengthening.

ſtrengthening. The *Romans* admired ſucking puppies; they ſacrificed them to their divinities, and thought them a ſupper in which the gods themſelves delighted.

The *ſecond* variety is,

2. The Barbet, whoſe hair being long and ſilky is much valued by the *New Zealanders* for trimming their ornamental dreſs. This variety is not eaten. The Iſlanders never uſe their dogs for any purpoſes but what we here mention, and take ſuch care of them as not to ſuffer them even to wet their feet. They are exceſſively ſtupid; they have a very bad noſe for ſmelling, and ſeldom or never bark, only now and then they howl. The *New Zealanders* feed their dogs entirely on fiſh.

The *Marqueſas*, *Friendly Iſlands*, *New Hebrides*, *New Caledonia*, and *Eaſtern Iſle*, have not yet received thoſe animals.

Virgil, the prince of Latin poets, has not thought the praiſe of dogs a ſubject unworthy of his pen. He recommends it to the huſbandmen of *Italy* to pay particular attention to the rearing and training of dogs for their own ſafety and that of their flocks, as well as for the pleaſures of the chace.

Nec tibi cura canum fuerit poſtrema: ſed una
Velocis Spartæ catulos, acremque Moloſſum,
Paſce fero pingui. Nunquam cuſtodibus illis
Nocturnum ſtabulis furem, incurſuſque luporum,
Aut inpacatos a tergo horrebis Iberos.
Sæpe etiam curſu timidos agitabis onagros,
Et canibus leporem, canibus venabere damas.
Sæpe volutabris pulſos ſilveſtribus apros
Latratu turbabis agens, monteſque per altos
Ingenti clamore premes ad retia cervum.

Geor. Lib. III. v. 404.

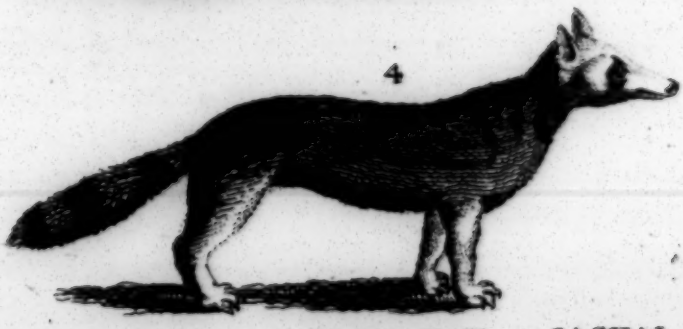
Nor

Plate XXIV









1. WOLF 2. FOX 3. ARTIC FOX 4. JACKAL

Nor, laſt, forget thy faithful dogs; but feed
With fatt'ning whey the maſtiff's gen'rous breed,
And Spartan race, who, for the fold's relief,
Will proſecute with cries the nightly thief:
Repulſe the prouling wolf, and hold at bay
The mountain robbers, ruſhing to the prey.
With cries of hounds, thou may'ſt purſue the fear
Of flying hares, and chaſe the fallow deer;
Rouze from their deſert dens the briſtled rage
Of boars, and beamy ſtags in toils engage. DRYDEN.

II.—*The Wolf**.

THIS animal, though very different in its diſpoſitions, and in many other particulars, yet is, by *Linnæus* and *Pennant*, ranked as the ſecond ſpecies of the dog. Both externally and internally, indeed, there is a reſemblance; but there are ſtriking and eſſential marks of diſtinction, which ſhall be afterwards mentioned.

Pennant deſcribes the wolf as having a long head; a pointed noſe; ears erect and ſharp; a tail buſhy and bending down; its lips black; pretty long hair; long legs, and large teeth; his head and neck cinereous; his body generally a pale brown, tinged with yellow: he is ſometimes found white, and in *Canada* ſometimes black: he is taller and ſtronger made than a large greyhound. Wolves inhabit the continents of *Europe*, *Aſia*, *Africa*, and *America*, even in as high latitudes as the Arctic circle. They have long been extirpated from *Great Britain*. The laſt wolf known in this iſland was killed in *Scotland* by the famous Sir *Ewen Cameron* in 1680. They continued but a few years longer in *Ireland*; for the laſt that

* Canis Lupus of the Syſt. Nat.

that has been heard of running wild in that iſland was killed in 1710. *Engliſh* records make no mention of their infeſting that country later than 1281. The vaſt foreſts on the continent of *Europe*, will always prevent their being extirpated there. The wolves of *North America* are the ſmalleſt that are known. When tamed, they are, as before obſerved, the dogs of the natives. The wolves of *Senegal* are the largeſt and fierceſt: they hunt their prey in company with the lion. Thoſe of the *Cape* are grey ſtripped with black. Some are of opinion that there are wolves in *New Holland;* but we leave it to time, and the ſettlers at *Botany Bay*, or others who may explore that vaſt iſland, or fifth continent rather, to aſcertain the fact. As only five other quadrupeds have yet been diſcovered there, the dog, the kangaroo, an opoſſum, a ſpecies of polecat, and a ſtraw-coloured beaſt like a hare, every carnivorous animal not qualified to catch the feathered tribes, muſt on that vaſt iſland be as ſcarce and as miſerable as the native inhabitants of the human ſpecies themſelves.

The wolf is one of thoſe animals whoſe carnivorous appetite is exceſſively ſtrong. Though he has received from nature the means of gratifying this taſte; though ſhe has beſtowed on him arms, craftineſs, ſtrength, agility, and every thing neceſſary for diſcovering, ſeizing, conquering, and devouring his prey; yet he often dies of hunger; becauſe men have declared war againſt him, put a price on his head, and forced him to flee to the foreſts, where he finds only a few ſpecies of wild animals, who eſcape from him by their ſwiftneſs, and whom he cannot ſurpriſe but by chance, or by a patient lying in wait at the places they are wont to haunt: he is naturally clowniſh and daſtardly; but want makes him ingenious, and neceſſity gives him courage: when preſſed with

with famine, he braves danger; he iſſues forth in the night, traverſes the country, roams about the cottages, kills all the animals that have been left without, digs the earth under the doors, enters with a dreadful ferocity, and puts every living creature to death, before he chooſes to depart, and carry off his prey.

When his hunger is extreme, he loſes the idea of fear; he attacks women and children, and even ſometimes darts upon men, till becoming perfectly furious by exceſſive exertions, he often falls a ſacrifice to pure rage and diſtraction. He is a ſolitary animal.

When ſeveral wolves appear together, it is an aſſociation, not of peace, but of war. It is attended with tumult and dreadful growlings, and indicates an intended attack upon ſome of the larger animals, as a ſtag, an ox, or a formidable maſtiff: horſes generally defend themſelves againſt their attacks; but all weaker animals fall a prey to them. This depredatory expedition is no ſooner over than they return in ſilence each to his ſolitude.

Though wolves prefer living to dead animals, yet, when the former fail them, and the latter fall in their way, they devour the moſt putrid carcaſſes. They are fond of human fleſh: could they always procure this, perhaps they would eat no other: they have been known to follow armies, to come to the field of battle where the bodies of the ſlain are careleſsly interred, to tear them up, and to devour them with an inſatiable avidity: and when once accuſtomed to human fleſh, theſe wolves ever after attack men, prefer the ſhepherd to the flock, devour women, and carry off children.

The *French* peaſants ſuppoſe ſuch wolves poſſeſſed with an evil ſpirit: ſuch was the *were-wulf* of the old *Saxons*.

Wolves are moſt ſuſpicious animals; they ſally forth with great caution, ſtop on the borders of the foreſt,

ſmell on all ſides, and catch the emanations of animals living or dead brought from a diſtance by the wind: they have an exquiſite ſcent: their ſenſe of ſmelling extends farther than their eye: they are ſaid to ſmell the odour of carrion at the diſtance of more than a league: they hunt by the noſe; and though voracious, are capable of long abſtinence: to allay their hunger, they have been known to fill their bellies with clay or mud.

They are ſuch ſolitary creatures, that there is little intercourſe even between the males and the females: they feel the mutual attractions of love but once a year, and never remain long together: the females come in ſeaſon in winter, the oldeſt firſt, and the younger later, from December to February, or the beginning of March. Many males follow the ſame female; then they growl, chaſe, fight, and tear one another. The female commonly flies a long time, fatigues her admirers, and retires while they ſleep, with the moſt alert or moſt favourite male, though he frequently falls a ſacrifice to the reſentment of the reſt. The ſeaſon of this ſavage brutal love continues only twelve or fifteen days. With regard to the period of geſtation, there is ſome little uncertainty: *Linnæus* and *Pennant* ſay, they go with young ſeventy or ſeventy-three days; *Buffon* * ſays, three months and a half, or a hundred days; Mr. *Smellie* ſays, ſeventy-three days or more †; but *Buffon* tells us that young whelps are found from the end of April to the month of July.

When the females are about to bring forth, they ſeek out a concealed place in the inmoſt receſſes of the foreſt: after fixing on the ſpot, they make it ſmooth for a conſiderable

* Vol. IV. page 200.

† Smellie's Philoſophy of Natural Hiſtory, page 283.

ſiderable ſpace: they then bring great quantities of moſs, and prepare a commodious bed for their young ones, which are, in number, from three to nine at a litter: like dogs, they are brought forth blind, and the mother ſuckles them during ſeveral weeks, and afterwards procures them food, and prepares it for them with great attention: though naturally more timid than the male; yet when her young are attacked, ſhe defends them with intrepidity; ſhe loſes all ſenſe of danger, and becomes perfectly furious: ſhe never leaves them till they are ſo ſtrong as no longer to need either her aſſiſtance or protection, which is the caſe when they are about ſixteen months old: they acquire their full growth at the end of two or three years, and live fifteen or twenty: when old, they turn whitiſh, and their teeth appear to be much worn: when full, or fatigued, they ſleep, but more during the day than the night; it is always a kind of light ſlumber: they drink often; if ſupplied with water, they can paſs four or five days without meat.

The wolf has great ſtrength in the muſcles of his neck and jaws: he carries a ſheep in his mouth, and at the ſame time outruns the ſhepherds; ſo that he can be ſtopped, or deprived of his prey, only by dogs: his bite is terrible; hunters therefore clothe their dogs, and guard their necks with ſpiked collars. The hunters diſtinguiſh wolves into young, old, and very old: the older the wolf, the larger his feet: the ſhe wolf's feet are longer and more ſlender; her heel is alſo ſmaller, and her toes thinner. A good blood-hound is neceſſary in hunting the wolf; but when he falls into the ſcent, he needs to be coaxed and encouraged, for all dogs have an averſion to the wolf, and proceed with coldneſs in the chace: when the wolf is raiſed, the greyhounds are let looſe in pairs: he may alſo be hunted with beagles or hounds; but as he darts

always ſtraight forward, and runs for a whole day without ſtopping, the chace is irkſome, except the beagles be ſupported by greyhounds, to teaze him, and give the hounds time to come up: then the whole together ſoon reduce him to the laſt extremity; and the hunters complete the buſineſs by ſtabbing him with a dagger: the dogs have ſuch a reluctance to his fleſh, that it muſt be prepared and ſeaſoned before they will eat it: though men attended with maſtiffs, beat the buſhes, lay ſnares and baits, dig pitfalls, and ſcatter poiſoned pieces of meat; yet the number of theſe deſtructive animals never decreaſes in woody countries.

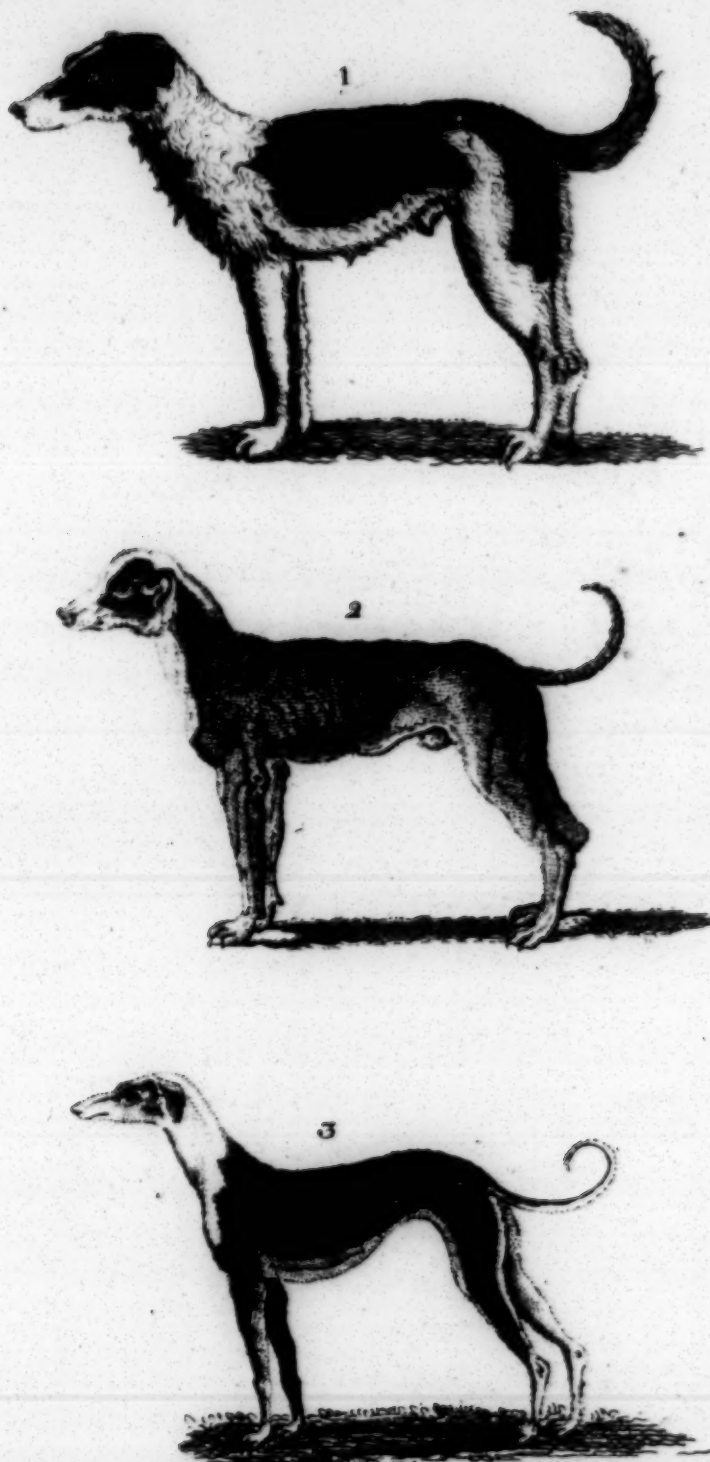
Whole countries are ſometimes obliged to arm in order to deſtroy them. When ſhot, they utter a cry; but they die in ſilence under the blows of a bludgeon.

The *Coſſacks* are ſaid to take wolves by the help of a large ſort of hawk called Berkhut, which is trained for the diverſion, and will faſten on them and tear out their eyes.

Buffon mentions a variety of the wolf common both to *France* and *Germany*, which is leſs deſtructive than the common wolf. Theſe, he ſays, have thicker hair, and are more yellow coloured: they never trouble the flocks, nor the habitations of men, but live entirely by hunting. But the wolf, even in his beſt ſtate, and moſt favourable appearance, is far inferior to the dog. The dog, even when wild, is not a fierce animal: he is eaſily tamed, and attaches himſelf with fidelity to his maſter. The young wolf may alſo be tamed, but he feels no attachments; nature in him is too powerful for education. With age, he reſumes his ferocious character, and returns, with the firſt opportunity, to his ſavage ſtate. Dogs, even thoſe of the moſt clowniſh race, love to aſ-

ſociate

Plate XX



1. IRISH GREYHOUND 2. DANISH DOG 3. GREYHOUND

ſociate with other animals; by inſtinct alone, they know to conduct and guard the flocks. The wolf, on the contrary, is an enemy to all ſociety, and keeps no company even with thoſe of his own ſpecies.

The diſpoſitions of the dog and wolf, are repugnant by nature, and inimical by inſtinct. A young dog trembles at the firſt glance of a wolf. The odour of the wolf, though new and unknown, excites ſuch an averſion and horror in the dog, that he flies, and comes quivering to the feet of his maſter. A maſtiff, who knows his own ſtrength, though terrified at the appearance of a wolf, attacks him with courage, endeavours to put him to flight, and exerts every effort to get rid of the object of his deteſtation. They never meet, but either flight or death is the conſequence: when the wolf is ſtrongeſt, he mangles and devours his prey: the dog, with more generoſity, contents himſelf with victory; he finds no ſavoury odour in the body of his dead enemy, but abandons him to be food for the ravens, and even for other wolves; for wolves eat the carcaſſes of each other, and, when one is much wounded, the others follow the blood, and aſſemble in troops to diſpatch him.

Their time of geſtation proves a difference of conſtitution between the wolf and dog; the former brings forth only once a year, the latter twice or thrice. Beſides, the appearance of the head and form of the bones, are by no means the ſame: the cavity of the eye in the wolf is placed obliquely; the orbits are inclined: his eyes ſparkle and ſhine in the dark: his body is ſtronger, but not ſo flexible; his limbs are firmer, his jaws and teeth larger than thoſe of the dog; and his hair coarſer and thicker. Ovid ſeems to have hit off ſeveral features of his picture in a few words, when ſpeaking of the change of *Lycaon*.

Fit

Fit lupus
Canilies eadem eſt, eadem violentia vultu:
Idem oculi lucent; eadem feritatis imago.

When an animal can defend itſelf, the wolf is cautious and circumſpect; he never fights but from neceſſity, never from motives of courage: the dog is gentle and courageous; the wolf, though ferocious, is timid: when he falls into a ſnare, he is ſo overcome with terror, that he may either be killed or taken alive without reſiſtance: he allows himſelf to be chained, muzzled, and led where you pleaſe, without exhibiting the leaſt ſymptom of reſentment or diſcontent. But to conclude the character of this robber of the fold; there is nothing valuable in the wolf but his ſkin, which makes a warm and durable fur: his fleſh is ſo bad, that it is rejected with abhorrence by all other quadrupeds; as no animal but a wolf will voluntarily eat a wolf: the ſmell of his breath is exceedingly offenſive: as he is groſs in his manner of feeding, he vomits frequently what he had formerly greedily ſwallowed, and is moſt conſummately diſagreeable: his aſpect is baſe and ſavage, his voice dreadful, his odour inſupportable, his diſpoſitions perverſe, his manners ferocious: he is odious and deſtructive when living; and when dead, except his ſkin, he is perfectly uſeleſs. We ſhould almoſt be ſorry that the mode of claſſification obliges us to bring him into ſuch good company, in ranging him under the genus of the *dog;* were it not that we could wiſh the maſtiff and him to meet ſtill more frequently than they do.

III.—*The Mexican Wolf.*

THIS ſpecies has a very large head, aſh-coloured, ſtriped tranſverſely, with bending duſky lines; great jaws, vaſt teeth; with very ſtrong briſtles on the upper lips, reflected backwards, not unlike the ſofter ſpines of a porcupine: Its colour is grey and white: its ears are large, erect, and aſh-coloured; the ſpace between them is marked with broad tawny ſpots: its neck is fat and thick, covered with a looſe ſkin, marked with a long tawny ſtroke: on the breaſt is another of the ſame kind: the body is aſh-coloured, ſpotted with black; and the ſides are ſtripped, from the back downwards, with the ſame colour: the belly is cinereous; the tail long, of the colour of the belly, tinged in the middle with tawny: the legs and feet are ſtriped with black and aſh-colour. This is the moſt beautiful of all wolves, and its ſkin ſhould be eſteemed for its variety of colours. Sometimes this variety is found white. It inhabits the hot parts of *Mexico* or *New Spain*; and agrees with the *European* wolf in its manners. It attacks cattle, and ſometimes men. No wolves are found farther ſouth on the new continent.

IV.—*The Fox* *.

PENNANT deſcribes him as a dog with a ſharp noſe, lively hazel eyes, and ſharp erect ears: his body is of a tawny red, mixed with aſh-colour: the fore part of his legs

* Canis Vulpes of the Syſt. Nat. In Greek Αλωπηξ; in Latin, Vulpes; French, Le Renard.

legs is black: his tail is long, ſtraight, buſhy, tipt with white: he is ſubject to much variety of colour.

The following are the principal varieties of this ſpecies:

1. The Fox with his tail tipt with black, the *Canis Alopex*, *Vulpes Campeſtris* of the Syſt. Nat.

2. The Croſs-Fox, with a black mark paſſing tranſverſely from ſhoulder to ſhoulder, and another along the back to the tail; the *Vulpes Crucigera* of *Geſner*, and *Le Renard Croiſé* of *Buffon*.

This variety inhabits the coldeſt regions of *Europe*, *Aſia*, and *North America*, and furniſhes a valuable fur, thicker and ſofter than the common ſort. Great numbers of theſe ſkins are imported from *Canada*.

3. The Black-Fox, the moſt cunning of any: its ſkin too is the moſt valuable: In *Ruſſia*, a lining of it is preferred to one of the fineſt ſables: a ſingle ſkin will ſell for four hundred rubles.

It inhabits the northern parts of *Aſia*, and of *North America*; its fur is ſuperior even to that of the Croſs-Fox.

4. The Brant-Fox, deſcribed by *Geſner* and *Linnæus*, of a ſmall ſize, and of a fiery redneſs. One that was the property of Mr. *Brook*, *London*, and which was ſent him from *Penſylvania*, was ſcarcely half the ſize of the common fox: its noſe was black and much ſharper; the ſpace round its ears ferruginous; its forehead, back, ſhoulders ſides, and thighs, black, mixed with red, aſh-colour and black: the aſh-colour predominated, which gave it a hoary look: the belly was yellowiſh; the tail black above and red beneath.

The Karagan, a ſmall ſpecies found in the *Kirghiſian* deſerts, and in *Great Tartary*, is allied to the Brant-Fox.

Its

Its head is yellowiſh above, reddiſh above the eyes: behind the whiſkers, it has a black ſpot: its ears are black without and white within; the exterior edge and baſe red, and near the baſe of that edge, a white ſpot: the colour of its back and ſides is like that of a wolf, and its hair is coarſe in the ſame degree: between its ſhoulders, there is a dark ſpot, from which, along the back to the tail, extends a reddiſh or yellowiſh track: a deep grey, or blackiſh ſpace, mixed with white, covers the throat, and is continued over the breaſt and part of the belly, the reſt of which is whitiſh.

This is a ſmall ſpecies deſcribed from the ſkins by Dr. *Pallas*.

5. The Corſak-Fox. This variety is of a ſmall ſize, has upright ears, ſoft downy hair, a buſhy tail as long as the body, a white throat, the irides of its eyes of a yellowiſh green: its colour, in ſummer, is pale tawny; in winter, grey: its hair is coarſer than that of the common fox.

The baſe and tip of its tail are black; the reſt of an aſh-colour. It inhabits the deſerts beyond the *Yaik;* and from the *Don* to the *Amur*. It lives in holes and burrows deep: it howls and barks, and is never found in woody places: it is caught by the *Kirghis-Kaiſſacks*, with falcons and greyhounds.

Forty or fifty thouſand of them are taken annually, and ſold to the *Ruſſians* at twentypence each. Great numbers of them are alſo ſent into *Turkey*: their ſkins were formerly in thoſe parts the medium of exchange inſtead of money.

The common fox inhabits all *Europe;* the cold, and the temperate parts of *Aſia; Barbary* alſo; but not the hotter parts of *Africa*. He abounds in *North America;* he is alſo found in *South America*. In all countries, they

have the ſame cunning diſpoſition, the ſame eagerneſs after prey, and commit the ſame ravages among game, birds, poultry, and the leſſer quadrupeds. They are very fond of honey; they attack the wild bees and neſts of waſps, for the ſake of the honey, wax, and young bees: they eat any ſort of inſects, devour fruit, and are very deſtructive in vineyards: they hide or bury what they cannot eat; the dog has ſomething of the ſame hoarding diſpoſition: they are very fond of baſking in the ſun: they ſleep ſound, in a round form like the dog, and may eaſily be approached without awaking them: they lodge under ground, and generally make uſe of a badger's hole, which they enlarge, adding ſeveral chambers, and never neglecting to form another hole to the ſurface, as a poſtern gate, by which they may make their eſcape, in caſes of extremity: they hunt for prey in the night; and, like the wolves, the ſhe foxes are in heat in the winter: they bring five or ſix at a time: if their young be diſturbed, they will remove them one by one, to a place of greater ſecurity: their voice is a yelp rather than a bark; but it is varied according to the intimations they mean to convey: their bite, like that of the wolf, is very ſharp and dangerous; and the ſevereſt blows will hardly make them quit their hold; no blows ſhort of the breaking of a limb will make them complain: their ſcent is exceſſively ſtrong: the hounds prefer following the fox to any other game; hence, the chace is more keen and animating. When hunted, they firſt attempt to recover their hole; if they find that ſtopt, which it is generally the huntſman's firſt care to have done, they fly the country, and try the ſwiftneſs and bottom of horſes and hounds in the purſuit. Though equally indefatigable, and even nimbler than the wolf, yet the fox truſts not entirely to his ſwiftneſs in running: his wiles and ſtratagems aſtoniſh

niſh and fatigue huntſmen of the greateſt experience. It were tedious to recount the numberleſs proofs that might be adduced of his craft and cunning. But when every ſtratagem fails, he always defends himſelf to the laſt with great courage and bravery, and dies under the teeth of dogs, or the ſtrokes of the bludgeon, without complaint, in ſilence, and without a groan.

His fleſh is not ſo bad as that of the wolf: dogs, and even men, eat it, eſpecially in Autumn, when it has been fattened on grapes. Theſe creatures are extremely common in the *Holy Land*. From the earlieſt, to the preſent time, they have always been particularly noxious to the vineyards. "Take us the *foxes*, the little foxes that "ſpoil the vines; for our vines have tender grapes *." Whether they were the ſpecies that *Samſon* uſed to deſtroy the corn of the *Philiſtines*, is undecided. Since jackals are found, to this day, in great abundance about *Gaza* †, it is much more probable, from their gregarious nature, that he ſhould have caught three hundred of them, than of the ſolitary quadruped the fox.

V.—*The Arctic Fox* ‡.

THIS ſpecies of the dog or fox has a ſharp noſe, and ſharp, rounded ears, almoſt hid in its fur: its hair is long and ſoft, and ſomewhat woolly: its legs are ſhort, having the toes covered with fur on all parts, like thoſe of a hare: its tail is ſhorter and more buſhy than that of a common fox, of a bluiſh grey or aſh-colour, ſometimes white: the young of the grey are black, before they come to

* Solomon. † Haſſelquiſt.

‡ Canis Lagopus of the Syſt. Nat. The Iſatis of Buffon.

maturity: their hair is much longer in winter than in ſummer, as is uſual with animals in cold climates.

They inhabit the countries bordering on the *Frozen Sea*, as far as the land is deſtitute of woods, which is generally from ſeventy to ſixty-eight degrees of latitude: this ſpecies extends to *Kamtſchatka*, and *Berings*, and *Copper Iſlands;* but are found in none of the other iſlands between *Kamtſchatka* and the other oppoſite parts of *America*, diſcovered by Captain *Bering* in 1741. They are found in *Greenland*, *Iceland*, *Spitzbergen*, *Nova Zembla*, and *Lapland:* they burrow under ground, in holes many feet in length, the bottom of which they line with moſs. In *Greenland* and *Spitzbergen*, they live in the cleſts of the rocks, not being able to burrow by reaſon of the froſt. Two or three pair, as a family, inhabit the ſame hole. They are in heat about Ladyday, and continue during that time in the open air: they afterwards take to their holes, and go with young nine weeks, like dogs, which they reſemble in other reſpects alſo. The *Ruſſians* indeed call them dogs; but they have all the cunning of the common fox, and prey on the young of geeſe, ducks, and other water-fowl, before they can fly; on the grouſe and hares of the country; on the eggs of birds; and in *Greenland* (through neceſſity) on berries, ſhell fiſh, or any thing the ſea throws out: but their principal food in the north of *Aſia*, and in *Lapland*, is the Leming or *Lapland* Rat; and hence, they are very migratory, following the Leming, a very wandering animal. Sometimes theſe foxes deſert the country for three or four years, probably in purſuit of their prey. The people in *Jenſea* ſuppoſe they go to the banks of the *Oby*. They are taken in traps; and often the Glutton and Great Owl deſtroy them before the hunter can come

to

to take them out. Their ſkins are of ſmall value: they are found in great troops on the banks of the *Frozen Sea*, and of the rivers that flow into it.

VI.—*The Antarctic Fox.*

THIS animal is mentioned under the name of wolf-fox in *Bougainville's* voyages: it is one third leſs than the common fox; has pointed ears, lined with white hair, and hazel irides; its head and body are of a cinereous brown; its hair is more woolly than that of the common fox, and reſembles the arctic: its legs are daſhed with a ruſt colour: its tail is duſky and tipped with white; ſhorter and more buſhy than that of the common fox: it has much the appearance and habit of a wolf in ears, tail, and ſtrength of limbs. *Pennant* ſuſpects it to be the ſmall *Mexican* wolf degenerated. It inhabits the *Falkland* iſles, and is the only quadruped in thoſe diſtant iſles that lives near the ſhores: it kennels like a fox, and forms regular paths from bay to bay, probably for the conveniency of ſurpriſing the water-fowl, on which it lives: it is at times very meagre, from want of prey, very tame, fetid, and barks like a dog.

The *Antarctic* iſlands were probably ſtocked with theſe animals by means of iſlands of ice, broken from the continent and carried by the currents.

VII.—*The Grey Fox.*

THIS animal is all grey, except a little redneſs about the ears; has a ſharp noſe; ſharp-pointed, long upright ears, and long legs. It inhabits *Carolina* and the warmer parts of *North America*. It agrees with the common fox in form, but differs from it in the nature of its dwelling; as it never burrows, but lives in hollow trees: it gives no diverſion to the ſportſman; for, after a mile's chace, it takes to its retreat: it has no ſtrong ſmell like the common fox; it feeds on poultry, birds, &c. and is eaſily tamed: their ſkins, when in ſeaſon, are made uſe of for muffs.

VIII.—*The Silvery Fox.*

THESE, reſembling in form the common fox, abound in the wooded eminences of *Louiſiana*, which are every where pierced with their holes: their coat is very beautiful: they have ſhort hair of a deep brown; over this ſprings long ſilvery hairs, which give the animal a very elegant appearance. They live in foreſts abounding in game, and never attempt the poultry which run at large without any danger.

IX.—*The Barbary Fox.*

THE chacal-adive, or ſmall jackal of *Buffon*, with a long and ſlender noſe, ſharp upright ears, and a long buſhy tail: its colour is a pale brown, with a ſpace above and below the eyes, black: from behind each ear it has a black line, each of which ſoon divides into two: theſe extend to the lower part of the neck: its tail is ſurrounded with three broad rings: it is of the ſize of a common fox; but its limbs are ſhorter, and its noſe more ſlender.

X.—*The Schakal* or *Jackal* *.

BUFFON thinks that this is the *thos* of *Ariſtotle*; and that the ſpecies laſt deſcribed is the panther of the ſame author.

This creature, vulgarly called the Lion's-Provider, inhabits all the hot and temperate parts of *Aſia*, *India*, *Perſia*, *Arabia*, *Great Tartary*, and all about mount *Caucaſus*, *Syria*, and the *Holy-Land*. It is to be met with in moſt parts of *Africa*, from *Barbary* to the *Cape* of *Good Hope*.

In ſize, it is near two feet and a half from the noſe to the tail: its tail, which is thickeſt in the middle, and tapers to the point, is near eleven inches long, and deſcends to the top of the hind legs: its height, at the ſhoulders, is about eighteen inches and a half: the hind parts are a little higher.

The

* Canis Aureus of the Syſt. Nat. The Lupus Aureus of Kæmpfer, and the Jackal and Adive of the Tranſlator of Buffon.

The irides of its eyes are of a yellowiſh brown: its ears are erect, formed like thoſe of the fox, but ſhorter, and leſs pointed; hairy and white within; but brown without, tinged with duſky: its head is ſhorter than that of the fox, and its noſe blunter: its lips are black and ſomewhat looſe: its neck and body very much reſemble thoſe of the fox; only its body is more compreſſed: the legs too have the ſame reſemblance; but are longer: its hair is much ſtiffer than that of the fox, though not ſo ſtiff as that of the wolf: it is ſhort about the noſe, but on the back three inches long; on the belly it is ſhorter; that of the tail meaſures four inches.

Its colour on the upper part is a dirty tawny, on the back this colour is mixed with black: the lower part of the body is of a yellowiſh white: its tail is tipt with black; its legs are of a tawny brown; the fore knees marked, but not always, with a black ſpot. Some, it is ſaid, are of a brilliant yellow; but *Pennant* will not allow that on any part they have thoſe vivid colours which could merit the title of *Golden*, beſtowed on this ſpecies by *Kæmpfer*, who calls it the Golden Wolf.

Anatomiſts have remarked that the *cæcum* of this animal agrees with that of the dog, and differs from that of the wolf and fox. The ſame remark has been made with regard to its teeth too: they have ſo much the nature of dogs, ſays Mr. *Pennant*, as to give reaſonable cauſe to imagine, that they are at leaſt the chief ſtock from which have ſprung the various races of thoſe domeſtic animals. When taken young, they grow inſtantly tame, and attach themſelves to mankind; they wag their tails, love to be ſtroked, diſtinguiſh their maſters from others, will come when called by the name that has been given them, drink water lapping, make water ſide-ways with their leg up: their dung is hard; *odorat anum alterius; cohæret*

hæret copula junctus. When they ſee dogs, inſtead of flying, they court their friendſhip and play with them. They will eat bread eagerly, notwithſtanding that they are carnivorous in a wild ſtate: they have a great reſemblance to ſome of the *Calmuc* dogs. Our dogs may probably be derived from thoſe domeſticated in the firſt ages of the world; and altered, by numberleſs accidents, into the many varieties which now appear among us.

The wild ſchakals go in packs of forty, fifty, or even two hundred together, and hunt, like hounds in full cry, from evening to morning. They deſtroy flocks and poultry, but in a leſs degree than the wolf or fox. They ravage the ſtreets of villages, and gardens near towns, and will even deſtroy children if left unprotected: they enter ſtables and out-houſes, and devour ſkins, or any thing made of leather: they are bold thieves; they will familiarly enter a tent, and ſteal whatever they can find from the ſleeping traveller.

In default of living prey, they will feed on fruits and roots; and even on the moſt infected carrion: they diſinter the dead, and greedily devour the moſt putrid carcaſes; for which reaſon, in countries infeſted by theſe animals, the graves are uſually made very deep, and covered with ſtones, or fortified with ſharp ſtakes.

They attend caravans, and follow armies, in hopes that death, or a battle, will provide them a banquet.

Their voice is naturally a howl, though a bark is latently inherent: their howlings and clamours in the night are dreadful, and ſo loud, that when they are near, people can ſcarcely hear one another ſpeak: when one begins to howl, the whole pack join in the cry: during the day they are ſilent: they dig burrows in the earth, in which they lie all day, and come out at night to range for prey: they hunt by the noſe, and are very quick of

ſcent. The females breed only once a-year, and go with young only four weeks. This laſt circumſtance ſeems to make ſtrongly againſt the ſuppoſition of their being the parent ſtock of the domeſtic dog. They bring from ſix to eight young ones at a time.

This creature has been called the Lion's-Provider, from an opinion that it rouzes the prey for that bad-noſed quadruped. The fact is, every creature in the foreſt is ſet in motion by the fearful cries of the jackals: the lion, and other beaſts of rapine, by a ſort of inſtinct, and the calls of appetite, attend to the chace, and ſeize ſuch timid animals as betake themſelves to flight at the noiſe of this nightly pack. *Buffon* concludes their character thus: The jackal unites the impudence of the dog with the daſtardlineſs of the wolf, and participating the nature of each, ſeems to be an odious creature, compoſed of all the bad qualities of both.

XI.—*The Capeſch Schakal**.

THIS ſpecies inhabits the countries about the *Cape of Good Hope*, and may probably be found as high as the Line: its length is two feet and three quarters: its tail one foot, buſhy, of a yellow brown; marked on the upper part with a line of black along it; and, towards the end, encircled with two rings of black: it is tipt with white: his ears are erect, of a yellowiſh brown, mixed with a few ſcattered black hairs: his head the ſame, only having ſome white hairs intermixed, and growing darker towards the hind part: his ſides are of a light brown, varied with duſky hairs: his throat, breaſt, and belly, are white: on his neck, ſhoulders, and back, there

* The Tenlic or Kenlic of the Hottentots.

there is a bed of black, broad on the ſhoulders, and growing narrower to the tail. When the hair lies ſmooth, the part on the neck ſeems barred with white; that on the ſhoulders with white *conoid* ſpots, one within the other, with the end pointing to the back. When the hair is ruffled, theſe marks vaniſh, or grow leſs diſtinct, and a hoarineſs appears in their ſtead.

XII.—*The Surinam-Dog, Fox* or *Jackal**.

THIS ſpecies is of the ſize of a large cat, has upright ears, little warts on the cheeks, above the eyes, and under the throat; its tongue is fringed on the ſides: the colour of the upper part of its body is greyiſh, the lower white: its tail bends downwards, and is ſmooth: it has five toes before, and four behind. It has its name from that part of *South America* where it is found.

XIII.—*The Zerda.*

THIS is a ſingular and beautiful animal, an inhabitant of the vaſt deſert of *Saara* or *Zara* in *Africa*. It has a very pointed viſage, long whiſkers, large, bright, black eyes, very large ears, of a bright roſe-colour, lined with long hair, and having their orifice ſo ſmall as not to be viſible, probably covered with a valve or membrane: its legs and feet are like thoſe of a dog: its tail taper. There is a beautiful engraving of it in *Bruce's* Travels.

Its colour is between a ſtraw and a pale brown.

Its length from the noſe to the tail, ten inches: its ears three and a half: its tail ſix: its height not five.

* The Canis Thous of Linnæus, but mentioned by no other Naturaliſt.

It burrows in the ſandy ground; is ſo exceſſively ſwift, that it is very rarely taken alive; feeds on inſects, eſpecially locuſts; ſits on its rump, and is very vigilant. It barks like a dog, but much ſhriller, and that chiefly in the night: it has never been obſerved to be ſportive One of them that was in the poſſeſſion of the late *Swediſh* Conſul at *Algiers*, who firſt introduced it to the knowledge of the Naturaliſts of *Europe*, fed freely from the hand, and would eat bread or boiled meat.

The *Count de Buffon*, on the authority of Mr. *Bruce*, aſcribes to it a different country and different manners. He ſays, that it is found to the ſouth of the *Palus Tritonides* in *Lybia*; that it has ſomething of the nature of the hare, and ſomething of the ſquirrel; and that it lives on the palm-trees, and feeds on the fruits.

GENUS XVIII.—*Hyæna.*

THE diſtinguiſhing characters of this genus are, ſix cutting teeth, and two canine, in each jaw; four toes on each foot; a ſhort tail, and a tranſverſe orifice between it and the anus.

The ſpecies of this genus, hitherto deſcribed, are few: they are only two, the *ſtriped* and the *ſpotted.*

I.—*The Striped Hyæna.*

THIS ſpecies is of the ſize of a large dog, but very ſtrongly made: it has long, ſharp-pointed, naked ears; an upright mane; high ſhoulders; the fore longer than the hind legs; the hair on the body coarſe, rough, and pretty long, of an aſh-colour, marked with long black ſtripes from the back downwards, and with others croſs the legs: its tail is very full of hair, ſometimes plain, ſometimes barred with black.

It inhabits the mountains of *Caucaſus*, and the *Altaic Chain*, *Aſiatic Turkey*, *Syria*, *Perſia*, and *Barbary*. Like the jackal, it violates the repoſitories of the dead, and greedily devours the putrid contents of the grave: it preys by night on herds and flocks; yet, for want of other food, it will eat the roots of plants, and the tender ſhoots of the palms: it is a ſolitary, unſociable animal, and inhabits the chaſms of the rocks; yet will venture into towns. When people ſleep in the open air, it will ſometimes ſnatch away children from the ſides of their parents. The ſuperſtitious *Arabs*, when they kill one, carefully bury its head, leſt it ſhould be applied to magical purpoſes. The ancients were wild in their opinion

of

of the hyæna: they believed that its neck conſiſted of one bone; that it changed its ſex; that it imitated the human voice; tha it had the power of charming the ſhepherds, and of riveting them, as it were, to the place they ſtood on: no wonder then that an ignorant *Arab* ſhould attribute to its remains preternatural powers. *Lucan* furniſhes the *Theſſalian* ſorcereſs with the neck of one as part of her infernal apparatus.

> Viſcera non Lyncis, non diræ nodus hyænæ
> Defuit *.
>
> Nor heart
> Of ſpotted Lynx, nor fell hyæna's neck
> Was wanting.

They uſually are cruel, fierce, and untameable animals, with a moſt malevolent aſpect. They have a ſort of obſtinate courage, which will make them face quadrupeds ſtronger than themſelves. *Kæmpfer* relates that he had ſeen one that had put to flight two lions. Their voice is a hoarſe diſagreeable mixture of growling and roaring. There have been inſtances of their being tamed. Mr. *Pennant* mentions his having ſeen one as tame as a dog; and *M. de Buffon* mentions another. Mr. *Bruce*, when he meets them, makes no more of them than ſo many hogs grunting about him. *Linnæus* indeed ſays, that it is of the ſize of a ſwine; has the appearance of a wild boar; the hairs of its back near a ſpan long, and tipped with black; and that it ought to be claſſed with the bear perhaps, or with the badger, as, like him, it has, between the anus and its tail, a bag filled with a fetid ointment. It is probable, that if taken very young, they might be reclaimed by good uſage; but in exhibitions, they are commonly kept in a perpetual ſtate of ill humour by the provocations of their maſters.

* Lucan, Lib. vi. 672.

II.—*The Spotted Hyæna.*

THIS ſpecies is ſuperior in ſize to the former; has a large and flat head, with ſome long hairs above each eye, and very long whiſkers on each ſide of its noſe: it has a ſhort black mane; the hair on its body is ſhort and ſmooth: its ears are ſhort, and a little pointed; black on the outſide, and aſh-coloured within: its face, and the upper part of its head, are black: its body and limbs are of a reddiſh brown, marked with diſtinct round black ſpots; and its hind legs with tranſverſe black bars: its tail is ſhort, black, and full of hair.

It inhabits *Guinea*, *Æthiopia*, and the *Cape*, and lives in holes of the earth, or clefts of the rocks: it preys by night, howls horribly; breaks into the folds, and kills two or three ſheep; devours as much as it can, and carries away one for a future repaſt: it will alſo attack mankind, ſcrape open graves, and devour the dead: it has very great ſtrength. A ſtory is told of one that ſeized a female negro, flung her over its back, held her by one leg in its teeth, and run away with her till ſhe was fortunately reſcued. But Mr. *Bruce* tells of one that would lay hold of a man, lift him up with the greateſt eaſe, and run a league or two with him, without once putting him on the ground. Mr. *Bruce* too was the firſt who remarked of the hyæna, that when forced to flee, they are lame of the left hind leg, which continues ſo remarkably ſo for about a hundred paces, that the animal ſeems as if he would tumble down on his left ſide.

GENUS XIX.—*Cat.*

THE feline genus is marked with the following characters: ſix cutting teeth, and two canine, in each jaw; five toes before, and four behind; ſharp claws, lodged in a ſheath, that may be put forth or drawn in at pleaſure; a round head, a ſhort viſage, and a rough tongue.

This genus comprehends many and various ſpecies. Theſe are, however, divided into two claſſes, the one with long, the other with ſhort tails: We begin with the former, and with the largeſt, and the moſt formidable ſpecies of that claſs, the King of the Foreſt.

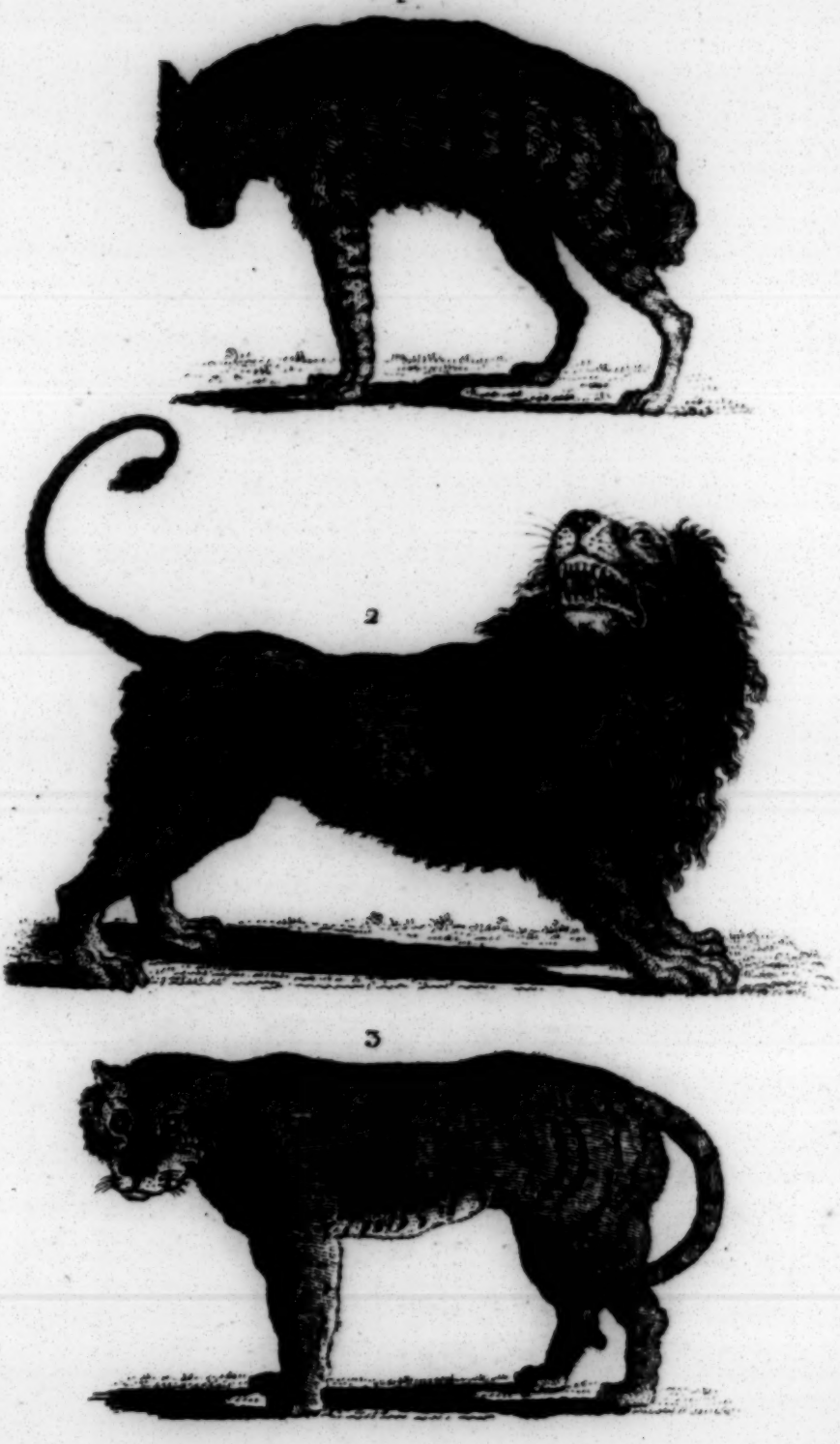
I.—*The Lion.*

THIS ſpecies has a large head; ſhort, rounded, ears; and a face covered with ſhort hair: the upper part of his head, his chin, and his whole neck and ſhoulders are covered with long ſhaggy hair like a mane: the hair on his body and limbs is ſhort and ſmooth, but long on the bottom of his belly: his limbs are of vaſt ſtrength: his tail is long, with a tuft of long black hairs at the end: his colour is tawny; but his belly inclines to white: the length of the largeſt lion from the noſe to the tail, is above eight feet; of the tail, four.

The lioneſs or female is leſs in ſize, and wants the mane.

He is met with, but rarely, in the hot parts of *Aſia*; ſuch as *India*, and *Perſia*; and a few are ſtill met with in the deſerts between *Bagdat* and *Baſſorah*, on the banks of the *Euphrates*: they have alſo been reckoned among the

Plate XXV.



1. HYÆNA 2. LION 3. TIGER

the animals of *Arabia*; but their proper country is *Africa*, where their ſize is the largeſt, their numbers the greateſt, and their rage more tremendous, being inflamed by the influence of a burning ſun, on a moſt arid ſoil: in the interior parts, amid the ſcorched and deſolate deſerts of *Zaara* or *Biledulgerid*, they reign ſole maſters; they lord it over every beaſt; and their courage never meets with a check: the nearer they approach the habitations of the human race, the leſs is their rage; or rather, the greater is their timidity: they have often experienced the unequal combat; and finding that there exiſts a being ſuperior to them, they commit their ravages with more caution. A cooler climate, again, has the ſame effect: But in the burning deſerts, where rivers and fountains are denied, they live in a perpetual fever; a ſort of madneſs which proves fatal to every animal they meet with.

There is mentioned a wonderful proof of the inſtinct of theſe animals in thoſe arid tracts of deſert ſand: there the pelican makes her neſt, and in order to cool her young ones, and accuſtom them to an element they muſt afterwards be converſant in, ſhe brings from afar, in her great gular pouch, ſufficient water to fill the neſt: the lion and other wild beaſts approach and quench their thirſt, yet never injure the unfledged birds, as if conſcious that their deſtruction would immediately put a ſtop to thoſe grateful ſupplies.

The courage of the lion is tempered with mercy: he has been known to ſpare the weaker animals as beneath his attention. There are upon record, many inſtances of his gratitude, the relations of which are ſo ſtrange and wonderful, that the reader may be directed by the note below *,

* Aulus Gell. Ælian. Pliny.

to find the ſtories, and to conſult the authorities himſelf.

Lions are capable of being tamed. In *Bell's* Travels * we are told, that the monarch of *Perſia*, full of ſavage ſtate, had, on days of audience, two great ones chained on each ſide of the paſſage to the room of ſtate, led there by keepers, in chains of gold. Why, then, may we not credit the ſtory of their being harneſſed for the triumphal car of the conqueror *Bacchus?*

The lion preys on all kinds of animals: as his ſcent is bad, he cannot hunt by the noſe; but his peculiar and tremendous roar ſtrikes terror into every beaſt of the deſert, and ſets them in motion, in open view: he then ſelects his object, and takes it, not ſo much by purſuit, as by a vaſt bound, ſtriking it with his talons, and tearing it to pieces. In inhabited countries, he ſometimes invades the folds, and leaps over the fences with his prey; and ſuch is his ſtrength, that he can carry off a middling ox with the greateſt eaſe. In many places he takes his prey by ſurpriſe, lurking in the thickets and ſpringing on it. Sometimes ſome of the human ſpecies fall victims to his hunger; but then, it is rather through neceſſity than choice. The *Arabs* have a notion of his ſparing the fair ſex; but Dr. *Shaw* informs us, that they make no diſtinction in theſe days: The ſame writer acquaints us that the fleſh of the lion is often eaten in *Barbary*; and that in taſte it reſembles veal. Mr. *Bruce* informs us that he has himſelf ſeveral times eaten of it. The lion's ſkin, which was formerly the robe of heroes, now ſerves the negroes for a mantle or a bed.

This ſpecies is not numerous; it even appears to diminiſh, and the human ſpecies to increaſe, in the courſe of revolving ages. The *Romans* drew more lions from *Lybia*

* I. 102.

Lybia for their public ſpectacles than could now be found in that country.

Some creatures of this ſpecies were formerly found in *Europe* between the rivers *Achelous* and *Neſſus*. In the days of *Ariſtotle*, there were lions in *Thrace*, *Macedonia*, and *Theſſaly*; but there are none now in *Europe*, and there never were any in *America*: the Puma of *America*, miſtaken for a lion, will come to be noticed afterwards.

Though this noble animal inhabits the warmeſt climates only, yet he can ſubſiſt for a great length of time in temperate countries, and perhaps with ſome attention, might even be enabled to propagate. The period of their geſtation is not as yet aſcertained: but ſome ſuppoſe it ſix months; that they bring forth but once a-year; and that the young ones, of which there are four or five at a litter, are very ſmall, not larger than a weaſel. In theſe animals, all the paſſions, even thoſe of the ſofteſt kind, are exceſſive. The maternal affection of the lioneſs is extreme. Though naturally weaker and leſs courageous than the lion, whenever ſhe has young, ſhe becomes dreadfully ferocious. The lion, it is alleged, has neither the ſenſes of ſmelling, nor of ſeeing, ſo acute as the other beaſts of prey. The light of the ſun ſeems to incommode him: he ſeldom goes abroad in the middle of the day, but makes all his excurſions during the night: when he ſees fires burning around the flocks or caravans, he never approaches them. Antelopes and monkies are his common food, though he takes the latter when upon the ground only; for he never climbs trees like the tiger or the puma: he devours as much at a time as will ſerve him two or three days. Unlike the wolf and the hyæna, he kills no more than he can conſume. He requires about fifteen pounds of raw fleſh *per* day: he drinks often,

lapping like a dog; but his tongue, in lapping, is bended downward: his breath is very rank, and the odour of his urine inſupportable.

The roaring of the lion is ſo loud, that when uttered during the night in the deſerts, it reſembles, by the repetition of echoes, the noiſe of thunder: this roaring is the ordinary voice of the lion; for, when enraged, he utters a ſhort and ſuddenly repeated cry: but the roaring is a prolonged cry; a kind of a deep toned grumbling, mixed with a ſharp vibrating noiſe: he roars five or ſix times in the day, and oftener before rain: when enraged, his cry is ſtill more terrible than his roaring: he then beats his ſides and the earth with his tail, agitates his mane, moves the ſkin of his face, and his large eyebrows, ſhews his dreadful tuſks, and thruſts out his tongue, which is armed with prickles ſo hard, that it alone is ſufficient to tear the ſkin and the fleſh, without the aſſiſtance of either teeth or claws: his ſtrength lies moſt in his head, jaws, and fore-legs: he ſees in the night like cats: his ſleep is ſhort, and he is eaſily awaked: his courſe is oblique, and conſiſts not in equal movements, but is performed by leaps and bounds: when he leaps on his prey, he makes a ſpring of twelve or fifteen feet; falls above the victim; ſeizes it with his fore feet; tears it in pieces with his claws, and then devours it with his teeth.

II.—*The Tiger.*

This creature, the *Felis Tigris* of *Linnæus*, with a ſmooth head and body, of a pale yellow colour, beautifully marked with long ſtripes of black, from the back, pointing to the belly, with others acroſs the thighs, is often ſuperior in ſize to a lion, and has vaſt ſtrength in its limbs: that called the Royal Tiger is of tremendous bulk. *M. de Buffon* mentions one that was, tail included, fifteen feet long: the tail is annulated with black, and one third ſhorter than the body: the tiger is peculiar to *Aſia*, and is found as far north as *China*, and *Chineſe Tartary*, and about the lake *Aral* and the *Altaic* mountains. It inhabits mount *Ararat* and *Hyrcania*, of old famous for its wild beaſts: but the greateſt numbers, the largeſt, and the moſt cruel, are met with in *India* and its iſlands. In *Sumatra*, the natives are ſo infatuated that they ſeldom kill them, having a notion that they are animated by the ſouls of their anceſtors. They lurk among the buſhes on the ſides of the rivers; are the ſcourge of the country, and almoſt depopulate many places: they are inſidious, blood-thirſty, and malevolent, and ſeem to prey on the human ſpecies as preferable to any other kind of animals: they do not purſue their prey, but bound on it from their ambuſh, with an elaſticity, and from a diſtance that is ſcarcely credible: if they miſs their object, they make off; but if they ſucceed, be it man, or be it beaſt, even one as large as a buffalo, they carry it off with ſuch eaſe, that it ſeems not the leaſt impediment to their flight. If undiſturbed, they plunge their head into the body of the animal up to the very eyes, as if it were to ſatiate themſelves with blood,

blood, which indeed they drain from the body before they tear it to pieces.

In the beginning of this century, ſome gentlemen and ladies being on a party of pleaſure, under the ſhade of ſome trees, on the banks of a river in *Bengal*, obſerved a tiger preparing for its fatal ſpring: one of the ladies, with amazing preſence of mind, laid hold of an umbrella and furled it full in the animal's face, which inſtantly retired, and gave the company an opportunity of removing from ſo terrible a neighbour.

Another party had not the ſame good fortune. A tiger darted among them while they were at dinner; ſeized on one gentleman and carried him off. It were needleſs to add, that he was never more heard of.

They attack all ſorts of animals, even the lion; and it has been known, that both have periſhed in their terrible combats.

In ſome parts of *India*, there is a popular notion that the rhinoceros and the tiger are in friendſhip, becauſe they are often found near each other. The fact is, the rhinoceros, like the hog, loves to wallow in the mire; and on that account, frequents the banks of rivers: the tiger alſo reſorts thither to quench its raging thirſt.

Pliny has been criticiſed for calling the tiger *animal tremendæ velocitatis;* but two travellers of good authority, and both eye witneſſes of the facts that they relate, confirm what *Pliny* ſays. The one indeed only mentions in general its vaſt fleetneſs. But the other ſaw a trial between one and a ſwift horſe, whoſe rider eſcaped merely by getting in time amidſt a circle of armed men. The chace of this animal was a favourite diverſion with the great *Chineſe* monarch *Cam-hi*, in whoſe company Mr. *Bell* and the *Pere Gerbillon* ſaw theſe proofs of the tiger's ſpeed.

The

The female, like the lioneſs, produces once a-year, four or five cubs at a litter. She is furious at all times; but her rage riſes to the utmoſt extremity, when robbed of her young: ſhe then braves every danger, and purſues the plunderers, who are often obliged to releaſe one of her cubs to retard her fury: ſhe ſtops, and carries it off to the neareſt cover, and inſtantly returns, and continues the purſuit of the ſpoilers to their boat, or the gates of their village. Their ſkins are much valued in *China*. The *Indians* eat their fleſh and find it neither unwholeſome nor diſagreeable.

They are ſaid by ſome to roar like a lion; but in a ſtate of confinement, ſeem to emit only a ſurly growl.

III.—*The Panther* *.

MR. *PENNANT* deſcribes this animal from the ſkin of one, which meaſured, from the point of the noſe to the tail, ſix feet ten inches, and its tail near three feet. He ſays, that its limbs are very ſtrong; that its hair is ſhort and ſmooth, of a bright tawny colour; that its back, ſides, and flanks, are elegantly marked with black ſpots, diſpoſed in circles; that there are from four to five of theſe ſpots in each circle, with a ſingle black ſpot in the centre of each; that on the face and legs there are ſingle ſpots only; that on the top of the back there is a row of oblong ſpots, the longeſt next the tail; that the cheſt and belly are white; the cheſt marked with tranſverſe duſky ſtripes; the belly and tail with large irregular black ſpots; that its ears are ſhort and pointed; and that the point of its noſe is brown.

It

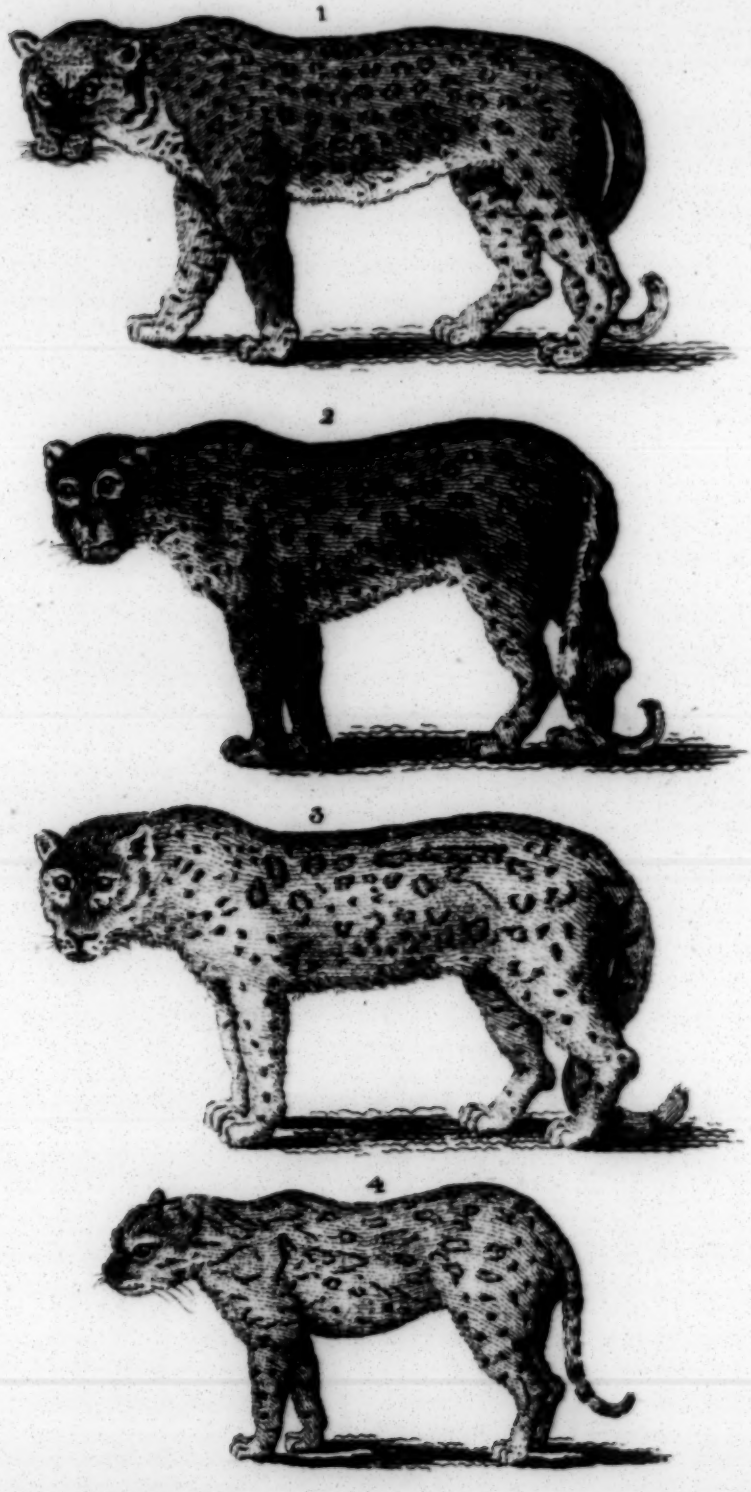
* The Felis Pardus of Linnæus.

It inhabits *Africa*, from *Barbary* to the remoteſt parts of *Guinea*. This ſpecies is next in ſize to the tiger: it is next to it alſo in cruelty, and in its general enmity to the animal creation: it is to *Africa* what the former is to *Aſia*, with this alleviation, that it prefers the fleſh of brutes to that of mankind; but when preſſed with hunger, it attacks every living creature without diſtinction: its manner of taking its prey is the ſame with that of the tiger, always by ſurpriſe, either lurking in thickets, or creeping on its belly, till it comes within reach. It will alſo climb trees in purſuit of monkies and leſſer animals; ſo that nothing is ſecure from its attacks: it is an untameable ſpecies, and always retains its fierce, its malevolent aſpect, and perpetual growl or murmur. Theſe and the leopards were the *varie* and *pardi* of the ancients. One would think that the numbers the *Romans* drew from thence for their public ſhews, ſhould have exhauſted the deſerts of *Africa*. *Scaurus* exhibited at one time one hundred and fifty panthers, *Pompey* the Great four hundred and ten, *Auguſtus* four hundred and twenty. They probably thinned the coaſts of *Mauritania* of theſe animals; but they ſtill ſwarm in *Guinea*.

Animals of this ſpecies, though they can never be tamed, are ſometimes trained to the chace: but great caution is requiſite in conducting and exerciſing them. When one of them is taken a-hunting, he is carried in a cart ſhut up in a cage, the door of which is opened when game appears: he then ſprings towards the animal, and, generally, at three or four bounds, ſtrangles it: but if he miſſes his aim, he becomes furious, and ſometimes attacks his maſter, who commonly prevents this hazard, by carrying along with him pieces of fleſh, or live animals, as lambs or kids, one of which he throws to him to appeaſe his rage, till he gets a cover over his eyes, puts

on

Plate XXVI.



1. PANTHER 2. LEOPARD 3. OUNCE 4. JAGUAR

on his chain, and conducts him back to his cart. This ſpecies may probably be the larger of the two ſpecies of panthers deſcribed by *Oppian*.

Though *Buffon* denies that this ſpecies is ever found in *America*, Mr. *Pennant* is rather inclined to think that it is, both from ſkins that he has ſeen which were ſaid to be brought from *America*, and alſo from the deſcriptions given of animals of the new world, which he thinks correſpond to this ſpecies only. *M. Condamine* and *Le Pere Cajetan Cattaneo* ſpeak of the panthers of *America*, as equal, and even ſuperior in ſize to thoſe of *Africa*; and that their colour is as bright as gold: And *Ulloa* deſcribes them as big as little horſes. But the new world, that part of it eſpecially which is poſſeſſed by the jealous *Spaniard*, is ſo little known, that it ſtill preſents to the naturaliſt a vaſt field for diſcovery.

IV.—*The Leopard.*

THIS ſpecies is conſiderably leſs than the former: its length from the noſe to the tail is only four feet; and its tail is two feet long.

It is of a lively yellow colour; marked on the back and ſides with ſmall ſpots, diſpoſed in circles, and placed pretty cloſely together: its face and legs are marked with ſingle ſpots: its breaſt and belly are covered with longer hairs than the reſt of its body, of a whitiſh colour: the ſpots on its tail are large and oblong.

It inhabits *Senegal* and *Guinea*, and ſpares neither man nor beaſt. When the beaſts of chace fail, the leopards deſcend in crowds from the interior parts of *Africa*, and make vaſt havock among the numerous herds that cover the rich meadows of the *Lower Guinea*: they tear

their prey in pieces with both claws and teeth; and though perpetually devouring, they are always thin: the panthers are their enemies, and deſtroy numbers of them: the negroes take them in pitfalls covered at the top with ſlight hurdles, on which is placed ſome fleſh as a bait; when they have killed one, they feaſt on its fleſh which is ſaid to be as white as veal, and very well taſted. The negreſſes make beads or a collar of its teeth, and attribute to them certain virtues. The ſkins are frequently brought to *Europe*, and are reckoned very valuable. *Buffon* ſays, that when it is of a bright yellow, and has its ſpots black and well defined, one ſkin will give eight or ten louis d'ors.

In *Aſia*, it is found in the mountains of *Caucaſus*, from *Perſia* to *India*; and alſo in *China*, where it is called Poupi. The *Bucharian* traders, who often bring their ſkins to *Ruſſia*, call them Bars. It inhabits *Arabia* alſo, where it is called Nemr. It is ſaid that in that country, as well as *Egypt*, it does no hurt to man unleſs provoked; but will enter houſes by night and deſtroy cats.

The manners and diſpoſitions of the leopard are ſimilar to thoſe of the panther; but we have not heard of his being ever trained to hunting, or any way tamed. This ſpecies ſeems to be ſubject to more varieties than the former; but theſe affect chiefly the darkneſs or lightneſs of its colour.

V.—*The Leſſer Leopard.*

THIS ſpecies is not half the bulk of the former: its tail is alſo ſhorter in proportion, and tapers to a point; whereas the tails of the panther and great leopard are of equal thickneſs from top to bottom: its face is ſpotted with black: it has a great black ſpot on each ſide of its upper lip: its breaſt is marked with ſmall ſpots: its belly is white ſpotted with black: its back, ſides, and rump, are covered with hair of a bright yellow, marked with circles of ſpots like the former, bnt the circles are leſs.

One of theſe was kept ſome years ago in the *Tower*, and ſeemed a good natured animal.

VI.—*The Hunting Leopard* *.

THIS animal is of the ſize of a large greyhound, of a long make, and has long legs and a narrow cheſt: it has a ſmall head: its eyes are of a pale orange: the end of its noſe black: a duſky line runs from each corner of the mouth to the corner of each eye: its ears are ſhort; of a tawny colour, marked with a brown bar: its face, chin, and throat, are of a pale yellowiſh brown: the face is ſlightly ſpotted: the body is of a light tawny brown, marked with numbers of ſmall round black ſpots, not in circles, but each diſtinct: the ſpots on the outſide of the legs are larger: the hair on the top of the neck is longer than the reſt: that on the belly is white and very long: the tail is of a reddiſh brown, longer than the body,

* The Guepard or Jaguar of Buffon.

marked above with large black ſpots, with very long hair on the under ſide.

It inhabits *India*, and is tamed and trained for the chace of antelopes: it is carried in a ſmall kind of waggon, chained and hood-winked, till it approaches the herd. When firſt unchained, it does not immediately make its attempt, but winds along the ground, ſtopping and concealing itſelf till it gets a proper advantage, then darts on the animals with ſurpriſing ſwiftneſs, and overtakes them by the rapidity of its bounds: but if it does not ſucceed in its firſt efforts, conſiſting of five or ſix amazing leaps, it miſſes its prey: loſing its breath, and finding itſelf unequal in ſpeed, it ſtands ſtill, gives up the point for that time, and readily returns to its maſter. This ſpecies is called in *India*, Chittah: it is uſed for the taking of jackals, as well as other animals.

VII.—*The Ounce.*

THIS ſpecies is of a ſtrong make, has a long back and ſhort ſpotted legs; and is about three feet and an half in length from the noſe to the tail: the tail full of hair, with large black ſpots, is upwards of three feet: its head is large, marked with ſmall round ſpots: its ears are ſhort: the hair on its body is long: its colour aſh, tinged with yellow: behind each ear it has a large black ſpot: the upper part of its neck is alſo varied with large ſingle ſpots: it has alſo long ſpots almoſt touching each other along the ſides of the back.

It inhabits *Barbary*, *Perſia*, *Hyrcania*, and *China*: it is an animal of a more gentle and mild nature than moſt of the preceding, and is, like the laſt, uſed for the chace of antelopes, and even hares: but inſtead of being conveyed

veyed in a waggon like the panther or hunting leopard, it is carried on the crupper on horſeback, and is as much under command as a ſetting dog, and returns at the leaſt call, and jumps up behind its maſter: it is ſuppoſed to be the panther of *Pliny*, and the leſſer panther of *Oppian*: their ſkins are brought from *China*, and ſold in *Ruſſia* for twenty ſhillings a-piece.

VIII.—*The Braſilian Tiger* or *Jaguar*.

THE hair of this animal is of a bright tawny colour: the top of its back is marked with long ſtripes of black: its ſides with irregular oblong ſpots, open in the middle; the middle of theſe is of the ground colour of the hair: the thighs and legs are marked with full black ſpots: the breaſt and belly are whitiſh: the tail is not ſo long as the body: the upper part deep tawny, with large irregular black ſpots; the lower with ſmall ſpots.

It grows to the ſize of a wolf, or even larger, and inhabits the hotteſt parts of *South America*, from the iſthmus of *Darien* to *Buenos Ayres*: it is fierce and deſtructive to man and beaſt. Like the tiger, it plunges its head into the body of its prey, and ſucks out the blood before it devours it: it makes a great noiſe in the night like the howling of a hungry dog: it is a very cowardly animal, and eaſily put to flight, either by the ſhepherds dogs or by a lighted torch, as it is afraid of fire: it lies in ambuſh near the ſides of rivers where it ſometimes fights a ſingular combat with the crocodile. When the jaguar comes to drink, the crocodile, ready to ſurpriſe any animal that approaches, raiſes his head out of the water, the former inſtantly ſtrikes its claws into the eyes, the only penetrable part of this dreadful reptile, who immediately

diately dives under water, pulling his enemy along with him, where they commonly both periſh.

IX.—*The Mexican Tiger* *.

THIS animal is about four times the ſize of a large cat, and is very ſtrongly made: its upper parts are of a bright tawny; its ſides whitiſh, marked length-ways with long ſtripes of black, hollow, and tawny in the middle, in which are ſprinkled ſome ſmall black ſpots: from the neck towards the ſhoulders, point others of the ſame colours: a black ſtripe extends along the back from head to tail: there is alſo a black ſtripe from the noſtrils to the corners of the eyes: its forehead is ſpotted with black: its legs are whitiſh, varied with ſmall black ſpots: the tail is alſo ſpotted with ſmall ſpots near its baſe, and with larger near the end, which is black.

An animal, ſuppoſed to be the female of this ſpecies, was ſhewn ſome years ago in *London*. Its ſhoulders were both barred and ſpotted: the tail not ſo long as the body, with large ſpots above and ſmall beneath.

It inhabits *Mexico*, the neighbourhood of *Carthagena*, and *Braſil*; lives in the mountains; and is very voracious, but afraid of mankind: it preys on calves, and different ſorts of game; lurks amidſt the leaves of trees; and ſometimes will extend itſelf along the boughs as if dead, till the monkies, tempted by their natural curioſity, approaching to examine it, become its prey.

Buffon ſays, of all ſpotted animals, the robe of the male of this ſpecies is unqueſtionably the moſt beautiful, and the moſt elegantly variegated. Even that of the leopard

* Felis Pardalis of the Syſt. Nat. The Ocelot or Mexican Cat of the Tranſlator of Buffon.

leopard is not to be compared with it for vivacity of colours, and ſymmetry of deſign; far leſs thoſe of the jaguar, panther, and ounce. But in the female the colours are fainter, and the deſign more irregular. They prefer blood to fleſh: hence, they deſtroy a great number of animals, becauſe, inſtead of ſatiating themſelves by devouring their fleſh, they only quench their thirſt by drinking the blood; the males have a remarkable ſuperiority over the females: the latter never preſume to partake of the prey till the former have enough.

They produce but two young at a litter.

X.—*The Puma* *.

THIS animal has a very ſmall head, ears a little pointed, large eyes, and a white chin: his back, neck, rump, and ſides, are of a pale browniſh red, mixed with duſky hairs: his breaſt, his belly, and the inſide of his legs, cinereous: the hair on his belly is long: his tail is duſky and ferruginous; the tip of it is black: his teeth are of a vaſt ſize; his claws are white; the outmoſt one of the fore feet much larger than the others: he is long-bodied, and ſtands high on his legs: his length from the noſe to the tail, is five feet three inches; his tail two feet eight.

He inhabits the continent of *America*, from *Canada* to *Braſil*, and has been miſtaken for the lion: he is the ſcourge of the colonies in the hotter and leſs populous parts of *America*; fierce and ravenous to the higheſt degree; he ſwims over broad rivers, and attacks cattle even in the incloſures; and, when much preſſed with hunger, ſpares not even the human ſpecies. In *North America*, however, their fury ſeems to be ſubdued by the rigour of

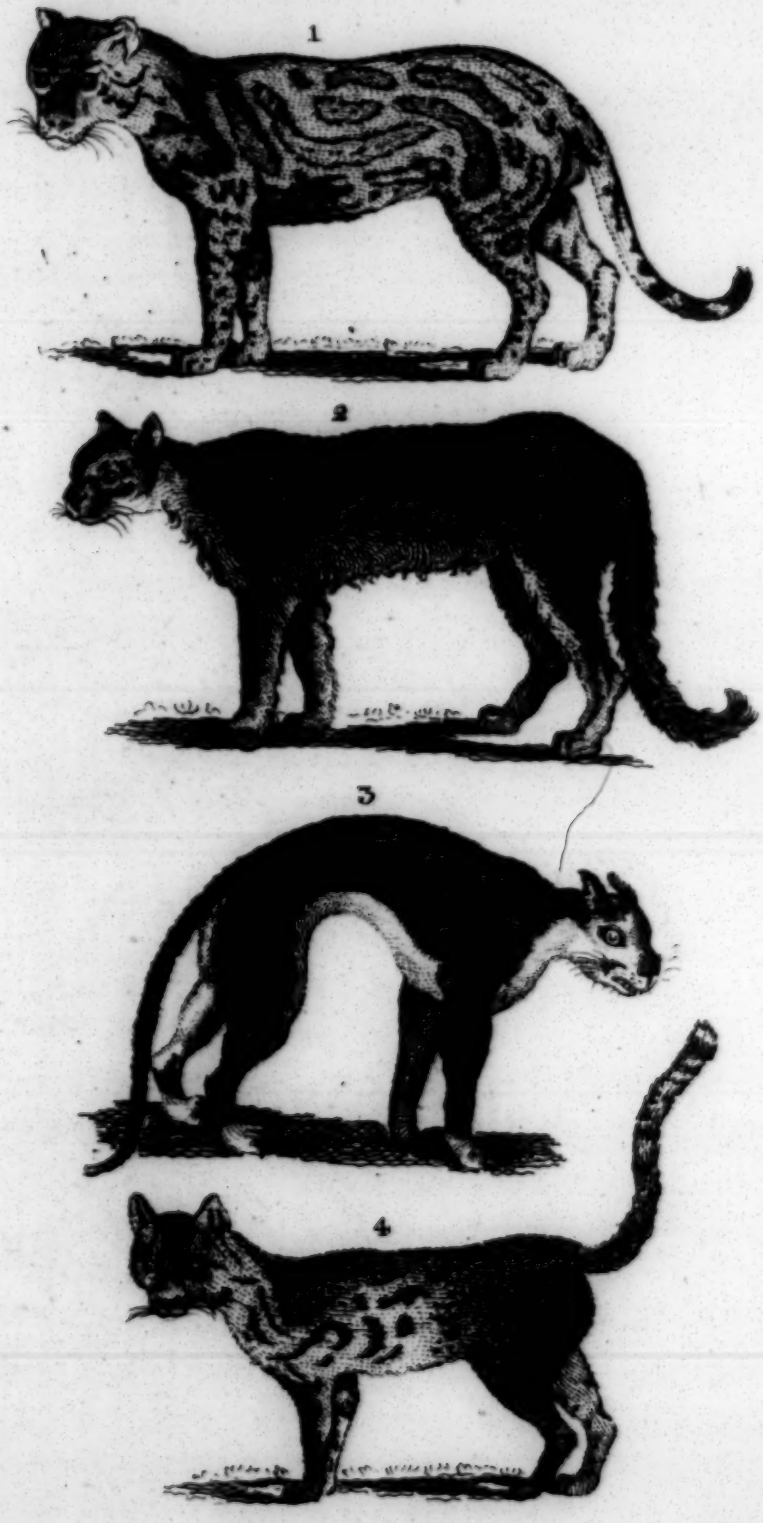
* Felis Concolor of the Syſt. Nat. The Couguar of Buffon.

of the climate: the ſmalleſt cur in company with its maſter, makes them ſeek for ſecurity, by running up trees; but they are equally deſtructive to domeſtic animals, and are the greateſt plague the planter has. When they lie in wait for the *Mooſe* or other deer, they lie cloſe on the branch of ſome tree, till the animal paſſes underneath, then they drop on it, and ſoon deſtroy it. They alſo make the wolf their prey. They conceal ſuch part of their prey as they cannot eat: they purr like a cat, and have ſoft fur of ſome value among the *Indians*, who cover themſelves with it during the winter; their fleſh is alſo eaten, and ſaid to be as good, and as white as veal.

XI.—*The Jaguar.*

THIS name having been applied to different ſpecies, is apt to create ſome degree of confuſion of ideas: it is the name given by the natives of *South America* to moſt of thoſe ravenous animals that are to them objects of terror. This ſpecies grows to the ſize of a heifer of a year old, and has vaſt ſtrength in its limbs. It inhabits *Braſil* and *Guiana*. It is cruel, and fierce; much dreaded by the natives; but happily it is a ſcarce ſpecies. Its head, back, ſides, fore part of the legs, and its tail, are covered with ſhort and gloſſy hair of a duſky colour; ſometimes ſpotted with black, but generally plain: its upper lip is white: it has a black ſpot at each corner of its mouth, long hairs above each eye, and long whiſkers on the upper lip: its lower lip, its throat, belly, and the inſide of its legs, are whitiſh, or of a very pale aſh-colour: its paws are white, and its ears pointed. *Buffon* ſuſpects this and the *Braſilian* tiger to be varieties of the ſame ſpecies;

Plate XXVII.



1. OCELOT 2. COUGUAR 3. BLACK COUGUAR 4. MARGAY

ſpecies; but *Pennant* is of a contrary opinion, as this is not ſpotted.

The ant-eater, though he has no teeth to defend himſelf, is the moſt cruel enemy the jaguars have to encounter. As ſoon as the jaguar attacks the ant-eater, it lies down on its back, and ſuffocates or ſtrangles him with its long claws.

XII.—*The Cape-Cat* or *Tiger*.

THE hiſtory of this animal is very little known. Mr. *Pennant* deſcribes it from a ſkin, found in a furrier's ſhop in *London*, who thought it came from the *Cape of Good Hope*. Its length, from the noſe to the tail, was nearly three feet. Its hair was ſhort, of a bright ferruginous colour; the face marked with black ſtripes, tending downwards. From the hind part of the head to the tail, the back was marked with oblong ſtripes of black; the ſides with very numerous ſmall black round ſpots; its belly white, and its tail long, of a bright tawny colour, ſpotted with black.

XIII.—*The Cayenne Cat* *.

THIS animal, of a bright tawny colour, is of the ſize of a common cat. Its face is ſtriped downwards with black. Its ſhoulders and body are alſo marked with ſtripes, and oblong large black ſpots; its legs with ſmall ones. Its breaſt, the inſide of its legs and thighs whitiſh, ſpotted

* The Margay or Cayenne cat of the tranſlator of Buffon.

with black. The tail is very long, marked with black, tawny, and grey. It inhabits *South America*, and perhaps *Louiſiana*, and lives on feathered game and poultry. It is very active. It goes by bounds or leaps, and lives much on trees. Its voice is like that of the common cat. It brings forth in all ſeaſons of the year, in hollow trees, and has two at a time. It ſeems a ſpecies of wild cat; but its hair is ſhorter than that of thoſe creatures in general, its head more ſquare, and its muzzle and tail longer. It is quite untameable.

XIV.—*The Bengal Cat.*

THESE cats have white whiſkers, large duſky ears, with a white ſpot in the middle of the outſide; between each eye and the noſe, a white line, and another under each eye. Their colour is a beautiful pale yellowiſh brown. The head and face is ſtriped downward with black. Along the back there are three ſtripes of the ſame colour, pointing towards the tail. Behind each ſhoulder to the belly, there is a black line. The chin and throat are white, ſurrounded with a ſemicircle of black. The breaſt belly and inſide of the limbs are white. The ſpots on thoſe parts, as well as thoſe on the legs and rump, are round. The tail is long, full of hair, brown annulated with black.

This ſpecies is diſtinguiſhed from the common cat by this peculiarity, that it is not afraid of being wet, but takes to the water like a water-dog. There was one of them brought to *England*, which ſwam on board a ſhip at anchor off the coaſt of *Bengal*. After it was brought to *England*, it coupled with the female domeſtic cats, which produced young, reſembling the male in marks on the body and in character; but the ground colour was cinereous

nereous. Mr. *Pennant* ſays, that he ſaw one of theſe plunge into a veſſel full of water about two feet deep, and bring up a bit of meat, flung in by way of trial; that it was a far better mouſer than the tame cat, and in a ſhort time deſtroyed ſwarms of rats, which, in ſpite of the domeſtic breed of cats, had made moſt horrible ravages.

Theſe ſmall ſpotted ſpecies are called by the general name of *tiger-cats*. Several kinds of them are found in the *Eaſt Indies*, and in the woods near the *Cape of Good Hope*. A good hiſtory of them, however, is ſtill wanted. *Kolben* mentions two kinds at the *Cape*. One he calls

The Wild Red Cat, having a ſtreak of bright red running along the ridge of the back to the tail, and loſing itſelf in the grey and white on the ſides. The ſkins of this ſpecies are ſaid to give eaſe in the gout, and are much valued on that account at the *Cape*. The other he calls

The Buſh Cat, which, he ſays, is the largeſt of the wild cats in the countries about the *Cape*.

The Saca is an obſcure ſpecies of wild cat, ſaid to be found in *Madagaſcar*. They are very beautiful, and couple with the tame cats. The tails of the domeſtic kinds in that iſland are, for the moſt part, turned up.

XV.—*The Manul.*

THIS cat, of the ſize of a fox, in its robuſt limbs and duſky colour very much reſembling a lynx, inhabits all the middle parts of the northern *Aſia*, from the *Ural* to the *Amur*. It loves open, woodleſs, and rocky countries, and preys on the leſſer quadrupeds. It has a large head. Its colour is univerſally tawny, mixed with a few white and brown hairs. The crown of its head is ſpeck-

led with black: its cheeks are marked with two dusky lines, running obliquely from the eyes. Its feet are striped obscurely with dark lines. Its tail is longer in proportion than that of the domestic cat, of an equal thickness in all parts, and beset thickly with hair. It is also encircled with ten black rings: the three next the tip almost touch one another; the rest are more remote.

XVI.—*The Common Wild-Cat.*

THIS animal has long soft hair, of a yellowish white colour, mixed with grey. The grey is disposed in stripes, pointing downwards from a dusky list that runs from the head to the tail, along the middle of the back. Its tail is marked with alternate bars of black and white; its tip is black. The hind part of its legs are also black.

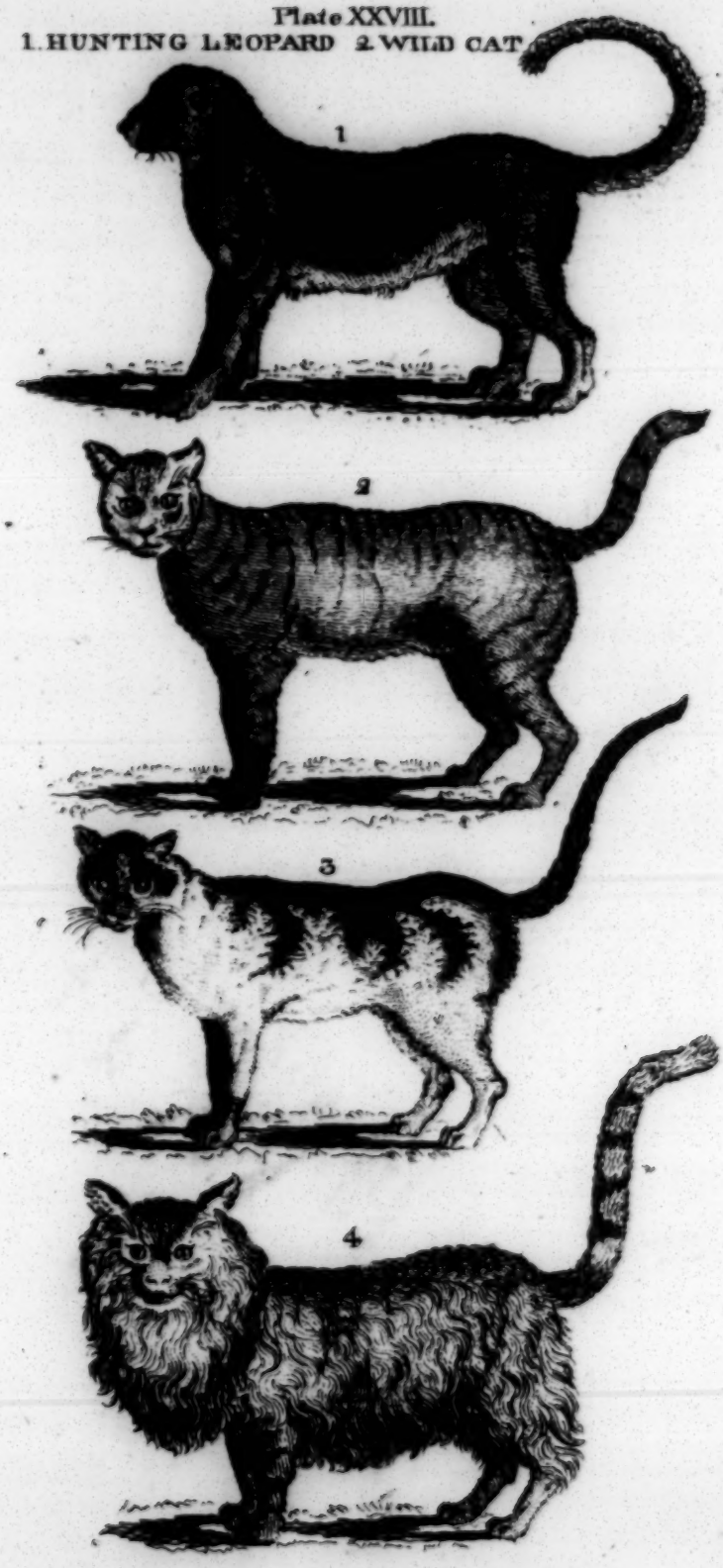
It is three times as large as the common domestic cat, and is very strongly made. It inhabits the woods of the most part of *Europe*; yet none are found in the vast forests of *Russia* and *Siberia*. Animals of this species dwell with the common lynx in all the wooded parts of the mountains of *Caucasus* and their neighbourhood; and are most destructive to lambs, kids, and fawns, and to all sorts of feathered game. This species is the stock or origin of the *domestic cat* *, which is subject to many varieties.

1. The Angora Cat, with long hair, of a silvery whiteness and silky texture, very long, especially about the neck, where it forms a fine ruff; has very long and spreading hair on the tail, and is of a large size. Its name marks

* The Felis Catus of the Syst. Nat.

Plate XXVIII.

1. HUNTING LEOPARD 2. WILD CAT



3. DOMESTIC CAT 4. CAT OF ANGORA

marks its country, the ſame which produces the fine haired goat, to which it alſo gives name.

Cats of this ſpecies degenerate in our climate after the firſt generation. A variety of this ſpecies, with pendent ears, is found in *China*. The *Chineſe* are very fond of them, and ornament their necks with ſilver collars. They are cruel enemies to rats. Perhaps the domeſtic animals, which the *Chineſe* call *ſumxi* or *ſumxu*; of a black or yellow colour, are of this ſpecies.

2. The Tortoiſe-ſhell Cat has his name from his colours, black, white, and orange, and the mode of their arrangement.

This is the *Spaniſh* cat of *Buffon*.

3. The Blue Cat, *Le chat des chartreux* of *Buffon*. This variety is properly of a dun colour, or greyiſh black, or ſlate colour. Many of them are reared in *Siberia*, on account of their fine fur: but they were brought there, as well as other ſpecies of domeſtic animals, by the *Ruſſians*.

4. The Long-headed Cat, with a ſharp noſe, from *New Spain*, is of the ſize of a common cat. It has ſhort legs, weak claws, and flat ears. It is of a reddiſh yellow colour, of a tame nature, and is an animal but little known.

Such are the varieties of this ſpecies that have hitherto been diſcovered and deſcribed. It were perhaps unneceſſary to enlarge on the character of the domeſtic and common cat. Thoſe with whom they are favourites need no information with regard to the natural hiſtory of cats; and thoſe who have an antipathy againſt them, will not wiſh to dwell on a diſagreeable ſubject.—We ſhall therefore be as conciſe as poſſible.

The cat, though a uſeful, is generally allowed to be a deceitful, domeſtic. When pleaſed, it purs and moves its tail;

tail; when angry, ſpits, hiſſes, and ſtrikes with its foot. In walking, it draws in its claws. It drinks little. It is fond of fiſh, of fleſh, and of milk; but does not always reject vegetables. It hates wet, moiſture, and bad ſmells. It is very cleanly, and loves to repoſe in a ſoft warm place, or baſking in the ſun. It is the natural enemy of mice and rats, and watches their motions with great gravity. It ſees by night with very little light. The brightneſs of the noon-day ſun almoſts blinds it. Its eyes ſhine in the dark; and its hair, when rubbed in the dark, emits electric fire. It is fond of perfumes, *marum*, *valerian*, *cat-mint*, and any thing of an aromatic flavour. It waſhes its face with its fore-feet at the approach of a ſtorm. It always lights on its feet, and is tenacious of life to a proverb: Its urine is corroſive, and very offenſive to the ſmell. It buries its dung. The female is very ſalacious, and is a piteous, jarring, ſqualling lover: She brings forth in ſeven weeks, twice, thrice, or oftener in the year, four or more at a litter. The male is apt to devour the young. When young, they are very frolicſome; when old, ſober and grave.—Though ſome have an unaccountable antipathy at cats, they are beloved and careſſed by many. The *Mahometans* in general are very fond of them. *Maillet* ſays, that the cats of *Egypt* are very beautiful; and adds, that the inhabitants build hoſpitals for them.

They delight in watching, attacking and deſtroying all weak animals indiſcriminately, as birds, young rabbits, hares, rats, mice, bats, moles, frogs, toads, lizards, and ſerpents. They hunt by the eye only; neither do they properly purſue, but lie in wait and attack animals by ſurpriſe; and after ſporting with them, and tormenting them for a long time, they put them to death, without neceſſity, even when well fed, purely to gratify their ſanguinary appetite.

appetite. Unlike the faithful dog, they are attached rather to places than to perſons. They require fifteen or eighteen months to come to their full growth, and live nine or ten years. Their colours are various, black, white, grey, red, mixed, ſpotted, ſtriped, and marked multifariouſly.

XVII.—*The Cat of New Spain.*

THIS ſpecies, though it ſtands the laſt of this diviſion, is by no means the leaſt. Its length is four feet and its height three. It has ſmall eyes, and the tail is the ſhorteſt in proportion to its ſize of any of this diviſion of the genus. Its colour is a cinereous blue, marked with long ſtreaks of black: its hairs are ſtrong enough to make pencils with firm points. It inhabits the country whence it derives its name. We may preſume that its character is ſimilar to that of others of the ſame genus.

We proceed to the ſecond diviſion of this genus, viz.

LYNXES, *or* CATS WITH SHORT TAILS.

XVIII.—*The Mountain Lynx*, or *Wild Cat* of *Carolina*.

THE length of this animal is two feet and a half; and his tail, which is barred with black, meaſures only eight inches. His ears are upright and pointed, marked with two brown bars acroſs. The colour of the head, and of the whole upper part of the body, is a reddiſh brown. He is marked with long narrow ſtripes on the back, and with numerous round ſmall ſpots on the ſides and legs. His belly is whitiſh; his chin and throat are of a pure white.

He

He inhabits *North America*; is a mild and gentle animal, and grows very fat. The *quauhpecotli* of *Mexico* agrees in nature with this; but is of a brown or dusky colour, darkest on the back, and glossy. Its feet are black: The hair on its belly is long and white; and its tail is thick and long.

XIX.—*The Serval* or *Mountain Cat.*

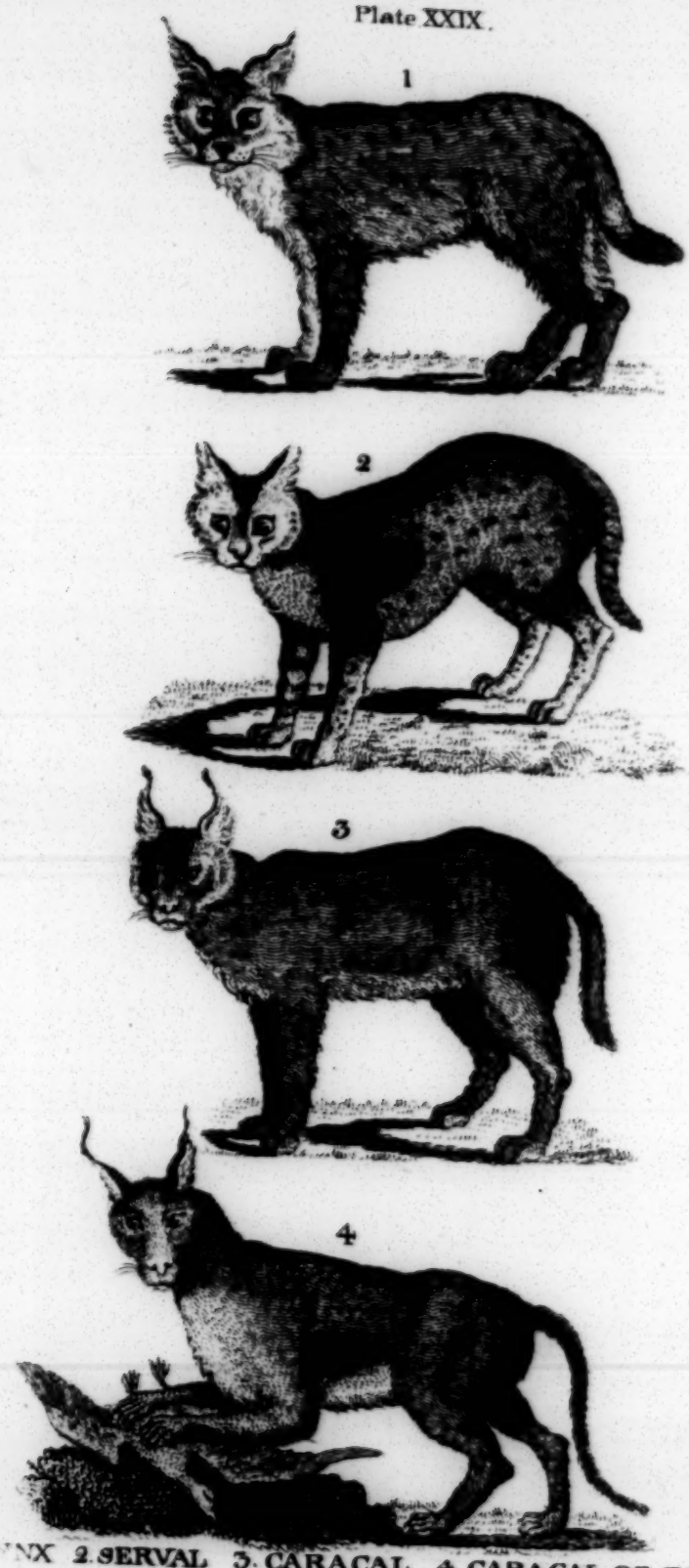
THIS animal, four times the size of a common cat, differs widely from the preceding in these particulars: The orbits of its eyes are white; the spots on its body universally round. In its nature it is very fierce and untameable. It inhabits the woods in the mountainous parts of *India*, lives and breeds on trees, and scarcely ever descends to the ground. It leaps with great agility from tree to tree. It is called by the natives of *Malabar Maraputé*, and by the *Portuguese* the *Serval.*

XX.—*The Lynx* *.

THIS wild cat has also a short tail, black at its end: Its eyes are of a pale yellow. The hair under its chin is long and full: the hair on its body is also long and soft, of an ash colour, tinged with red, and marked with dusky spots, more or less distinct on different subjects: in some they are scarcely visible. Its belly is whitish; its ears are erect, and tufted with long black hairs: these pencils of hairs at the ears are characteristic of the different species of lynxes: its legs and feet are very thick and strong. A *Russian* lynx will measure, from nose to tail, four

* The Felis Lynx of the Syst. Nat.

Plate XXIX.



LYNX 2. SERVAL 3. CARACAL 4. CARACAL OF BENGAL

four feet ſix inches, while the tail is only ſix inches long. They vary ſometimes in their colour. The *Irbys*, from *Lake Blackaſh*, ſituated to the weſt of the river *Irtiſh*; as alſo the *Katlo* of the *Swedes*, is whitiſh, ſpotted with black, and larger than the common kind. This large variety is called by the *Germans*, Wolf-lucks, and Kalb-lucks, on account of its ſize.

It inhabits the vaſt foreſts of the north of *Europe*, *Aſia*, and *America*, but not the hot regions of *Africa*, or of *India*, though the poets have harneſſed them to the chariot of *Bacchus*, in his conqueſt of that country. The female brings two or three at a time. It is a long-lived animal; it climbs trees, and lies in wait for the deer that paſs under; drops on them, and ſeizing the jugular vein, ſoon makes them its prey. It does not attack man, but is very deſtructive to the reſt of the animal creation; ſince, after ſucking the blood and devouring the brains, it frequently abandons its prey, and goes in queſt of freſh game.

The furs of theſe animals are valuable for their ſoftneſs and warmth; but their colour varies according to the ſeaſon and climate. Numbers of them are annually imported from *North America*, and the north of *Europe* and *Aſia*. The farther north and eaſt they are taken, the whiter they are, and the more diſtinct the ſpots. The moſt elegant kind is the *irbys* already mentioned. Their ſkins ſell on the ſpot for one pound Sterling each.

The ancients celebrated the lynx for its great quickneſs of ſight, and feigned that its urine was converted into a precious ſtone. Our lynx, though his ſight cannot penetrate ſtone walls, has brilliant eyes, a mild aſpect, and an agreeable and ſprightly air. His urine is not converted into precious ſtones, though it may chance to fall upon ſuch; but, like the cat, he covers it with earth.

He is generally about the ſize of a fox. The ſkin of the male is more ſpotted than that of the female. He does not run out like the wolf, but walks and ſprings like the cat. The wild cats, the pine weaſels, the ermines and the ſquirrels, are unable to eſcape him. He likewiſe ſeizes birds when opportunity ſerves. His fur is more beautiful and richer in winter than in ſummer.

XXI.—*The Bay Lynx.*

THIS animal, about twice the ſize of a cat, derives its name from the ground colour of its head, back, and ſides, and the exterior parts of its limbs, which are of a bright bay, obſcurely marked with duſky ſpots. Its irides are yellow; and the orbits of its eyes are edged with white: its tail is ſhort: its ears are upright, ſharp pointed, and tufted with long black hairs: its face is marked with black ſtripes pointing to the noſe. On each ſide of the upper lip, there are three rows of ſmall black ſpots, with long ſtiff hairs iſſuing out of them: its cheeks are marked with black curved ſtripes: its cheeks, lips, and lower parts are white: the inſide of the fore legs is marked with two black bars, and the upper part of the tail with duſky ſtrokes; and next the end with one of deep black: its tip and under ſide are white.

It is a creature of a ſtrong make, and inhabits the inner parts of the province of *New York*.

XXII.—*The Caſpian Lynx.*

THE head of this lynx is a little more oblong than that of the common cat. Its reſtleſs ſhining eyes are adorned with a moſt brilliant golden pupil: its noſe is oblong and bifid: its whiſkers are ſcarcely two inches: its ears are erect, oval, and lined with white hairs: their outſide is reddiſh, and their ſummits are tufted with black hairs: its hair is coarſer than that of the cat or common lynx, but leſs ſo than that of the wolf: it is ſhorteſt on the head; but on the back it is two inches long. The colour of its head and body is a yellowiſh brown, or duſky; its breaſt and belly are of a bright brown, nearly orange: it has two obſcure tranſverſe duſky bars near the bending of the knee: its feet are like thoſe of the cat, clothed with hair, and black below: its tail, thick and cylindric, reaches only to the flexure of its leg: it is of the ſame colour with the back, tipped with black, and having three black rings near its end. In its general appearance it has the form of the domeſtic cat: its length is two feet ſix inches; its tail eleven inches; its height before nineteen inches, behind twenty. It is ſometimes found ſo large as to meaſure three feet. It inhabits the reeds and woods in the marſhy parts that border on the weſtern ſides of the *Caſpian Sea*. In manners, voice, and food, it agrees with the wild cat: it conceals itſelf during the day, and in the night wanders over the flooded tracts, in ſearch of prey: it feeds on rats, mice, and birds, but ſeldom climbs trees: it is exceeding fierce, and never frequents the haunts of men. It is ſo impatient of captivity, that one taken in a trap, by which it had its leg bro-

ken, refuſed for many days the food placed by it; but, in its rage, devoured the fractured limb, with pieces of the ſtake it was faſtened to, and broke all its teeth in its mad efforts to get looſe.

XXIII.—*The Perſian Lynx.*

THIS is the Caracal of *Buffon*, and is nearly of the ſize of a fox: It has a lengthened face, and ſmall head: its ears are black, very long and ſlender, and terminated with a tuft of black hairs: the inſide and bottom of the ears are white; its noſe is alſo white: its eyes are ſmall; the upper part of its body is of a pale reddiſh brown, the tail ſomewhat darker: its belly and breaſt are whitiſh: its limbs are ſtrong, and pretty long; the hind part of each leg is marked with black; its tail is about half the length of its body. It inhabits *Perſia*, *India*, and *Barbary*. They are often brought up tame, and uſed in the chace of leſſer quadrupeds, and the larger ſort of birds, as cranes, pelicans, and peacocks, which they ſurpriſe with great addreſs. When they ſeize their prey, they hold it faſt with their mouth, and lie for ſome time motionleſs upon it: they are alſo ſaid to attend the lion, and to feed on the remains of his prey. They are fierce when provoked. Dr. *Charleton* ſays, he ſaw one fall on a hound, which it killed and tore to pieces in a moment, though the dog defended himſelf to the utmoſt.

This animal has alſo been called the lion's guide, and the lion's provider. *Buffon* mentions ſeveral varieties of this ſpecies; particularly one from *Bengal*, with a long tail,—a character which ought to exclude it from this diviſion.

viſion. *Pennant* mentions a variety of it, which he deſcribes under the name of the

Lybian Lynx.

THIS cat has ſhort black tufts to the ears, which are white within, and of a lively red without: its tail has four black rings, and is white at the tip: it has black marks behind its legs: it is greatly inferior in ſize to the former, not being larger than a common cat. It inhabits both *Lybia* and *Barbary*.

Genus XX.—*The Bear.*

This genus, of which there are five ſpecies, with a few ſubordinate varieties, is diſtinguiſhed by

Six cutting, and two canine teeth in each jaw, and five toes on each foot. Animals of this genus, in walking, reſt on the hind feet, as far as the heel.

I.—*The Black Bear* †.

This ſpecies has a long head, ſmall eyes, and ſhort ears, rounded at the top: its limbs are ſtrong, thick, and clumſy: its feet are large, and its tail is very ſhort: its body is covered with very long ſhaggy hair; the colour is various. The largeſt bears of this ſpecies are of a ruſty brown; the ſmalleſt of a deep black. Some on the confines of *Ruſſia* are black, mixed with white hairs, called by the *Germans*, *Silver Bar*. Some are found in *Tartary* of a pure white; but they are very rare.

They inhabit the northern parts of *Europe*, *Aſia*, and *Arabia*, the *Alps* of *Switzerland* and *Dauphiné*; *Japan* and *Ceylon*, *North America* and *Peru*. Thus they appear to be confined to no one climate; but ſeem to bear with almoſt any, except the burning ſands of *Africa*.

The brown bears are ſometimes carnivorous, and will deſtroy cattle, and eat carrion; but their general food is roots, fruits, and vegetables: they will rob the fields of peaſe: and when they are ripe, they pluck up great quantities

† The Urſus of Pliny, and the Urſus Cauda abrupta of the Syſt. Nat.

Plate XXX.

1



2



3



1. BEAR 2. WHITE BEAR 3. POLAR BEAR

quantities of them, beat them out on ſome hard place, eat them, and carry off the ſtraw. They will alſo, during winter, break into the farmer's yard, and make great havock among his ſtock of oats. Bears are particularly fond of honey.

II.—*American Bear.*

THE black bears of *America* form a very diſtinct variety: they are much ſmaller in ſize: their noſes are long and pointed, and of a yellowiſh brown colour: the hair on the body and limbs is blacker, more ſmooth and gloſſy than that of the *European* kind.

The ſame variety is alſo found in *Kamſchatka*: they are very cowardly, and will not attack mankind unleſs provoked, or in defence of their young. Thoſe of *Kamſchatka* will bite thoſe of the natives whom they find aſleep, but will not devour them. In both countries they confine themſelves entirely to vegetables, and are remarkably fond of maize and potatoes: they reject animal food, even when preſſed by hunger.

Bears ſtrike with their fore foot, like a cat: they ſeldom or never uſe their mouths in fighting; but ſeizing the aſſailant with their paws, and preſſing him againſt their breaſt, almoſt inſtantly ſqueeze him to death. Some imagine their *Latin* name, *Urſus*, to be derived from this mode of hugging an antagoniſt.

The females, after conception, retire into the moſt ſecret places; leſt, when they bring forth, the males ſhould devour the young. So impenetrable is their retreat during their pregnancy, that out of five hundred, killed in one

one winter in two counties of *Virginia*, only two females were found, and thoſe not pregnant *.

Winter is their breeding ſeaſon: they bring two, rarely three, young at a time: the cubs are deformed, but not a ſhapeleſs maſs, to be licked into ſhape, as the ancients pretended †. The cubs, even of the brown bear, are of a jetty blackneſs, and often have round their necks a circle of white. The fleſh of a bear in autumn, when they are moſt exceſſively fat, by feeding on acorns and other maſt, is moſt delicate food; and that of the cubs ſtill finer: but the paws of the old bears are reckoned the moſt delicate morſel: their fat is very white and ſweet.

Their oil is excellent for ſtrains and old pains.

In the latter end of autumn, after they have fattened themſelves to the greateſt degree, the bears withdraw to their dens, where they continue for a great number of days in total inactivity and abſtinence from food; having no other nouriſhment than what they get by ſucking their feet, where the fat lodges in great abundance. In *Lapland*, they paſs the long night in dens lined warmly with a vaſt bed of moſs, in which they roll themſelves, ſecure from the cold of that ſevere ſeaſon. Their retreats are either in cleſts of rocks; in the deepeſt receſſes of the thickeſt woods; or in the hollows of ancient trees, which they aſcend and deſcend with ſurpriſing agility. As they lay in no winter proviſions, they are in a certain ſpace of time forced from their retreats by the urgent calls of hunger, and come out extremely lean. Multitudes of them are killed annually in *America* for the ſake of their fleſh or ſkins; which laſt make a conſiderable article of commerce.

There are no bears in *Britain* or in *France*, except, perhaps, a few in the moſt unfrequented mountains of the

* Lawſon, 117. † Pliny, Lib. viii. c. 36.

the latter. They are ſolitary animals; but the young follow their mother ſo long as they need her aſſiſtance: they are ſaid to live twenty or twenty-five years: the male and female live not together, but have each a ſeparate place of retreat: their amazing fatneſs makes them light for ſwimming; and accordingly they traverſe with eaſe rivers and lakes. Upon their ſides and thighs their fat is ſometimes ten inches thick. The ſoles of their feet appear to be compoſed of ſmall glands: when wounded, there iſſues out a white milky juice: it is this perhaps that they ſuck from their paws.

Buffon mentions two domeſtic bears, that in 1772 were at *Berne*: they had been brought from *Savoy* thirty years before that period: they began to generate at the age of five: the female thereafter was in ſeaſon every year in the month of June, and brought forth in January: ſhe produced the firſt time one cub only, and afterwards ſometimes one, ſometimes two; but never more than three: ſhe was exceeding fond of them: their eyes were ſhut during four weeks. At firſt they exceeded not eight inches in length: at the end of three months they meaſured only fifteen.

After the death of the male, which happened in conſequence of a fall from a high tree, the female appeared to be much afflicted, and refuſed every kind of nouriſhment for ſeveral days: but unleſs theſe animals be brought up together from their earlieſt youth, they cannot endure one another; and after being accuſtomed to this kind of ſociety, the ſurviver will not admit another mate. They are ſaid to have weak eyes, but acute ſenſes of hearing, touching, and ſmelling. When the bear is hunted, and finds himſelf overpowered, he leans his back againſt a rock or a tree, collects turf and ſtones, which he throws

at his enemies: it is generally in this ſituation that he receives the finiſhing blow.

II.—*The Polar*, or *White Bear*.

THIS ſpecies has a long head and neck, and ſhort round ears: the end of its noſe is black; its teeth are very large; its hair is long, ſoft, and white, tinged in ſome parts with yellow; its limbs are of great ſize and ſtrength. Animals of this ſpecies grow to a vaſt ſize; the ſkins of ſome are thirteen feet long. They are confined to the coldeſt part of the globe, and have been found as far as navigators have penetrated northward, above the parallel of eighty degrees. The frigid climates alone ſeem adapted to their nature; even the north of *Norway* and the country of *Meſen*, in the north of *Ruſſia*, are deſtitute of them: they are found on the ſhores of *Hudſon's Bay*, *Greenland*, and *Spitzbergen*: they are alſo met with in great abundance in *Nova Zembla*, and from the river *Oby* along the coaſt of *Siberia* to the mouths of the *Jeneſei* and *Lena*; but are never ſeen far inland, unleſs they loſe their way in miſts. None are found in *Kamſchatka* or its iſlands.

They have been ſeen as far ſouth as *Newfoundland*; but they are not natives of that country, being only brought there accidentally on the iſlands of ice that float along the northern ſeas, from the polar regions ſouthward.

During ſummer, the white bears are either reſident on iſlands of ice, or paſſing from one to another. They ſwim admirably, and can continue that exerciſe ſix or ſeven leagues: they dive with great agility: they bring forth two young at a time; and ſo ſtrong is the affection between

tween their parents and them, that they die rather than deſert one another. Their winter retreats are under the ſnow, in which they form deep dens, ſupported by frozen pillars of the ſame, or elſe under ſome great eminence, beneath the fixed ice of the frozen ocean.

They feed on fiſh, ſeals, and the carcaſſes of whales, and on human bodies, which they will greedily diſinter: they ſeem to be very fond of human blood; and are ſo fearleſs as to attack companies of armed men, and even to board ſmall veſſels. When on land, they live on birds and their eggs. Allured by the ſcent of the ſeals fleſh, they often break into the houſes of the *Greenlanders*. Their greateſt enemy of the brute creation is the *Morſe*, with which they have terrible conflicts, but are generally worſted; the vaſt teeth of the former giving it a decided ſuperiority.

Their fleſh is white, and ſaid to taſte like mutton; but their liver is very unwholeſome: their fat is melted for train oil; and that of the feet is uſed in medicine.

One of this ſpecies was brought over to *England* a few years ago, and exhibited in many places. It was very furious; almoſt always in motion; roared loud; and ſeemed very uneaſy, except when cooled, by having pail-fulls of water poured upon it.

Land bears, ſometimes ſpotted with white, at other times wholly white, are ſometimes ſeen in the parts of *Ruſſia* bordering on *Siberia*, in a wandering ſtate, and are ſuppoſed to have ſtrayed out of the lofty ſnowy mountains which divide the two countries. They are ſaid to dread the whale, who ſcents and purſues them, from a natural antipathy; becauſe they eat her young.

III.—*The Wolverene Bear* *.

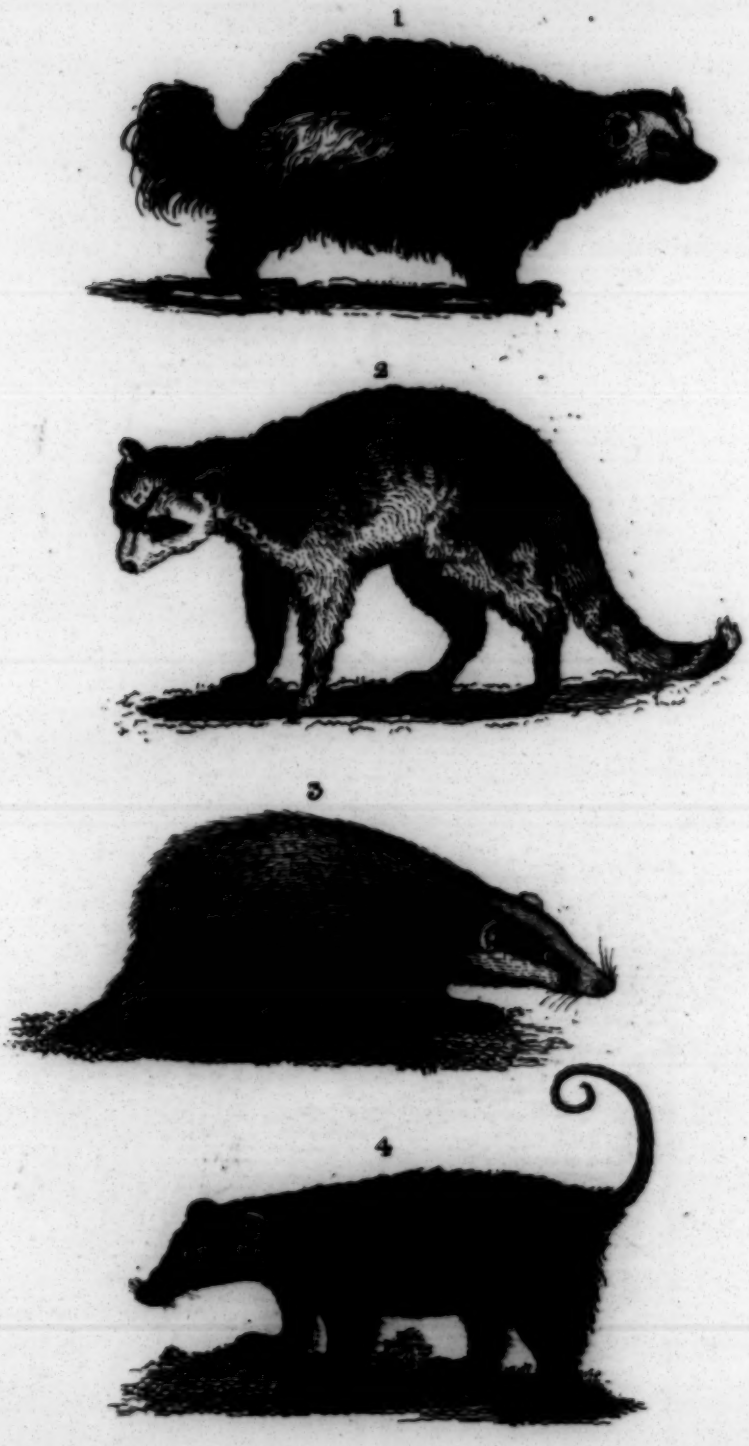
THIS ſpecies of the bear has a black ſharp-pointed viſage, and ſhort, round ears, almoſt hid in the hair. The hair on its head, back, and belly, is reddiſh, tipt with black; ſo that, at firſt ſight, thoſe parts appear quite black: its ſides are of a yellowiſh brown. This colour paſſes, in form of a band, quite over the hind part of the back above the tail: it has a white ſpot on its throat, and on its breaſt another white mark, in form of a creſcent: its legs are very thick and ſhort, of a deep black: it has five toes on each foot; but they are not deeply divided. Like the brown and the black bear, it reſts on its foot as far as the firſt joint of the leg, and walks with its back greatly arched: its claws are ſtrong and ſharp, white at their ends: its tail is clothed with long coarſe hairs; thoſe at the baſe are reddiſh; thoſe at the end black. Some of the hairs are ſix inches long. The length of the animal itſelf is about twenty-eight inches: the trunk of the tail meaſures ſeven inches, and its hair ſix more. Its whole body is covered with very long and thick hair, which varies in colour according to the ſeaſon. It inhabits *Hudſon's Bay* and *Canada*, as far as the ſtraits of *Michilimackinac*.

It is a voracious animal, but ſlow of foot; it is conſequently obliged to take its prey by ſurpriſe. In *America* it is called the Beaver Eater; for it watches thoſe animals as they come out of their houſes, and ſometimes alſo breaks into their habitations and devours them.

In

* The Urſus Luſcus of the Syſt. Nat. The Quickhatch of Hudſon's Bay, and the Wolverene of the Tranſlator of Buffon.

Plate XXXI.



1. GLUTTON 2. RACCOON 3. BADGER 4. OPOSSUM

In a wild ſtate it is extremely fierce, and is a terror to both the wolf and the bear. They will not prey on it when they find it dead, perhaps on account of its being ſo very fetid, ſmelling like a pole-cat. It makes a ſtrong reſiſtance when attacked. If it can lay hold on it, it will tear the ſtock from a gun, and pull the traps it is caught in to pieces. It burrows, and has its den under ground. *Mr. Graham*, a gentleman long reſident in *Hudſon's Bay*, ſays, that it will lurk on a tree, and drop on a deer paſſing underneath, and faſten on it till the animal is quite exhauſted.

Charlevoix applies the *American* name Carcajou, which properly belongs to this animal, to the puma, or brown panther of *North America*.

IV.—*The Glutton.*

THIS is a bear with a round head, a thick blunt noſe, and ſhort ears, rounded except at the tip. Its limbs are large, and its back is ſtraight, marked along its whole length with a tawny line: its tail is ſhort, and very full of hair: its hair in all other parts is finely damaſked, or watered like a ſilk, and very gloſſy; but it ſometimes varies to a brown colour. One brought from *Siberia*, and kept alive at *Dreſden*, meaſured forty-four inches, and nineteen in height.

It inhabits *Lapland*, the northern and eaſtern parts of *Siberia* and *Kamſchatka*. Thoſe of *Kamſchatka* differ and vary to white and yellowiſh. The natives prefer the ſkins of theſe to ſuch as are black: they ſay the heavenly beings wear no other garments. The women wear the paws of the white ſort in their hair, and eſteem the ſkin of

of one the moſt valuable preſent their huſbands or lovers can make them.

Theſe animals derive their name from their voracious appetite. That one already mentioned as being kept at *Dreſden*, would eat thirteen pounds of fleſh in a day, and not be ſatisfied: but the report of their filling themſelves ſo full as to be obliged to go between two trees, in order to force out a part of the food, ſeems to be fabulous. The hunters of the iſatis or *Arctic* fox, on the banks of the frozen ſea, complain much of their depredations on thoſe animals when caught in a trap or ſnare, as they go in queſt of theſe, but are too cunning to be enſnared themſelves.

Like the lynx and *Canadian* carcajou, or wolverene, it lurks on the boughs of trees, and falls on any animal that paſſes beneath, faſtens on it, and deſtroys it. Its favourite game is deer, and about the *Lena*, horſes. It may be tamed.

It differs from the bear in its lean habit, and by not lying inactive during the winter; and alſo by its living entirely on animal food: it is alſo more bold, voracious, and cunning. Being more voracious than any other of our carnivorous animals, it has been called the Vulture of Quadrupeds.

The *Ruſſians* call it Roſomak; the *Kamſchatkans*, Timmi, and the *Koratſki*, Haeppi. An animal called by the *Greenlanders* Amanki, and thought by ſome to be the ſame as the glutton, *Mr. Pennant* thinks to be a fabulous creature, as *Greenland* is deſtitute of wood.

V.—*The Racoon* *.

This ſpecies of the bear, of the ſize and figure of a ſmall badger, is ſaid to partake of the qualities of the fox, the dog, and the monkey. He has a ſharp-pointed black noſe; the upper jaw longer than the under: his ears are ſhort and rounded: his eyes are ſurrounded with two broad patches of black: a duſky line runs down his forehead to his noſe; the reſt of his face, his cheeks and chin are white. The upper part of his body is covered with hair, aſh-coloured at the root, whitiſh in the middle, and tipt with black: his tail is as long as his body, very buſhy, and annulated with black: his fore legs are much ſhorter than the hind ones: he has five toes on each foot, armed with ſtrong ſharp claws: his toes are alſo black, and quite divided: he ſometimes varies in colour. Mr. *Pennant* mentions his having ſeen one of a cream-colour.

He inhabits the warm and temperate parts of *America*; he is found alſo in the mountains of *Jamaica*, and in the iſlands about the mouth of the *Gulph of California*: he appears not in *Canada*; and yet he can ſupport exceſſive cold: he is eaſily tamed, very good natured and ſportive, familiar and careſſing, but as unlucky as a monkey, and implacable in his reſentment: he is almoſt always in motion, very inquiſitive, examining every thing with his paws, which he uſes as hands: he reſts upon the firſt joint of his hind legs, and ſits up to eat: he ſoftens, or rather dilutes, every kind of dry food that is given him, when confined: He is extremely fond of ſweet things, and of ſtrong liquors, and will get exceſſively drunk: he delights

* Urſus Lotor of the Syſt. Nat.

delights in hunting ſpiders, graſhoppers, ſnails, and worms: he retires to a diſtance to obey the calls of nature: he has all the cunning of the fox, and is very deſtructive to poultry, but will eat all ſorts of fruits, green corn, &c.; yet he prefers fiſh and eggs to almoſt every thing. At low water, he feeds much on oyſters: though he is very dexterous at opening them himſelf, to ſave himſelf the trouble, he will watch their opening, and ſnatch out the fiſh with his paw. Sometimes his foot is caught in the ſhell, and he is kept there till he is drowned by the coming in of the tide. He is fond of crabs alſo.

He climbs trees very nimbly: he goes by leaps, and rather gambols than walks: his movements, though oblique, are quick and light: his fur is eſteemed next to that of the beaver for making hats.

A letter from *M. Blanquart* to *M. Buffon* gives us an amuſing delineation of the manners of this animal:

" My racoon, before he came into my poſſeſſion, had " always been chained. In this ſtate of captivity, he " was very gentle, but had little inclination to careſs. " The people of the houſe were all equally kind to him, " but he received them differently; for what pleaſed him " in one, he revolted againſt in another; and in this his " conduct was invariable.

" His chain ſometimes broke, and liberty rendered " him inſolent. He took poſſeſſion of an apartment, and " would allow none to enter it: it was with ſome diffi- " culty that he could be again reconciled to bondage. " Since he came under my management, I have fre- " quently given him his liberty. Without loſing ſight " of him, I allowed him to walk about with his chain; " and each time his gratitude was expreſſed by a thou-

" ſand

" ſand careſſing gambols: But this is by no means the " caſe when he makes his eſcape himſelf: He then " roams about, ſometimes for three or four days toge- " ther, upon the roofs of the neighbouring houſes, de- " ſcends during the night time, into the court-yards, " enters the hen-houſes, ſtrangles all the poultry, and " eats their heads. His chain does not render him more " humane, but more circumſpect only: He then em- " ploys every artifice to make the fowls grow familiar " with him; he permits them to partake of his victuals; " and it is only after having inſpired them with the " higheſt notions of ſecurity, that he ſeizes one and tears " it to pieces. Some young cats have met with the ſame " fate.

" This racoon is not very grateful for the careſſes he " receives; but is extremely ſenſible of bad treatment. " A ſervant one day gave him ſeveral laſhes with a " whip; but the man has endeavoured ever ſince in vain " to accompliſh a reconciliation. Neither eggs nor fiſh, " of which the animal is very fond, can appeaſe his re- " ſentment. At the approach of the ſervant, he flies " into a rage, his eyes kindle, he ſprings at the man, " utters dolorous cries, and rejects every thing that is " preſented to him, till the object of his reſentment diſ- " appears.

" If any perſon ſtrikes him, or if he be attacked by " an animal that he thinks ſtronger than himſelf, he " makes no reſiſtance, but, like the hedge-hog, conceals " his head and feet, by rolling up his body in the form " of a ball; no complaint eſcapes him; and in this poſi- " tion he calmly ſubmits to be killed.

" He abhors children; their crying irritates him; and " he makes every effort to ſpring upon them. A ſmall

" bitch, of which he is fond, he chaſtiſes ſeverely if ſhe
" bark too loud. I know not why, ſeveral other animals
" equally deteſt ſharp cries."

This ſpecies acquires not its full growth till it be two years and a half old.

GENUS XXI.—*The Badger.*

THIS genus of digitated quadrupeds coincides in ſeveral of its diſtinctive characters with ſome of the preceding. Like them, it has ſix cutting, and two canine teeth in each jaw, and five toes on each foot: it has alſo very long ſtraight claws on its fore feet; and, like the hyæna, a tranſverſe orifice between the tail and the anus. This genus reſembles the hyæna in another reſpect, as there are only two ſpecies belonging to it, the common badger and the *Indian*; but theſe have an intermediate variety.

I.—*The Common Badger* *.

THIS ſpecies has ſmall eyes, ſhort rounded ears, and a ſhort thick neck: his noſe and chin, the lower ſide of his cheeks, and the middle of his forehead, are white: his ears and eyes are incloſed in a pyramidal bed of black: the hair on his body is long and coarſe: its bottom is of a yellowiſh white; its middle is black; and it is aſh-coloured at the ends: his throat, breaſt and belly, are black: his tail is covered with long hair, of the ſame colour with that of the body: his legs are very ſhort and thick: the claws on his fore feet are very long: a fetid white matter exſudes from the orifice beneath his tail. He is an animal of a very clumſy make, commonly two feet ſix inches in length: his tail meaſures ſix inches: he

* The Meles of Pliny. The Urſus Meles of the Syſt. Nat.

weighs from fifteen to thirty-four pounds. Mr. *Pennant* met with a male of the weight laſt mentioned in the year 1779; but ſuch are very rare.

It inhabits moſt parts of *Europe*, as far north as *Norway* and *Ruſſia*, and the *Step* or deſert beyond *Orenburgh* in the *Ruſſian Aſiatic* dominions; in *Great Tartary*, and in *Siberia* about the river *Tom*, and even about the *Lena*; but there are none to the north. It inhabits *China* alſo, and is often found in the butchers ſhops in *Pekin*, the *Chineſe* being fond of them for the table. It is a ſcarce animal in moſt countries: it is a diffident and ſolitary creature: it ſeldom appears in the day: it confines itſelf much to its hole, and is an indolent, ſleepy creature, but generally very fat. It feeds by night, and eats roots, fruits, graſs, inſects, and frogs, but is not carnivorous, according to Mr. *Pennant*, while *Buffon* aſſerts that it prefers fleſh to every thing elſe. It runs very ſlowly; when overtaken, it comes to bay, and defends itſelf vigorouſly: its bite is hard and dangerous. It is hunted during the night for the ſkin, which ſerves for piſtol furniture, and its hair for making bruſhes to ſoften the ſhades in painting. Its fleſh makes good bacon. The diviſion of this ſpecies into two, the *ſwine* and the *dog* badger, Mr. *Pennant* thinks unneceſſary, as he aſſerts there is only one. It burrows under ground, and makes ſeveral apartments, but forms only one entrance from the ſurface.

Mr. *Buffon* ſays, the badger retires to the moſt ſecret places, to the inmoſt receſſes of the foreſt, and there digs a ſubterranean habitation: he ſeems to fly ſociety, and even the light, and ſpends three-fourths of life in his dark abode, from which he never departs but in queſt of ſubſiſtence. As his body is long, his legs ſhort, his claws, eſpecially thoſe of the fore feet, very long and ſtrong,

ſtrong, he digs and penetrates the earth with greater facility than any other animal: he makes his hole winding and oblique. The fox, who cannot dig with equal dexterity, avails himſelf of the operations of the badger. Being unable to make him quit his habitation by force, the fox practiſes every art to render him uneaſy. He ſtands centinel at the entrance of the hole, and even defiles it with his ordure. He afterwards takes poſſeſſion, enlarges, and fits it up for his own accommodation: The badger, though obliged to change his habitation, leaves not his country; he goes to a ſmall diſtance only, where he digs a freſh hole. When at ſome diſtance from his hole, he is ſoon overtaken by the dogs. They ſeldom, however, accompliſh their purpoſe without aſſiſtance. The hair of the badger is very thick, and his legs, jaws, teeth, and claws, are exceedingly ſtrong. Theſe natural weapons he uſes with courage and dexterity. He lies on his back, and reſiſts all the efforts of the dogs, and wounds them in the moſt dangerous manner. He is beſides tenacious of life, fights long, makes a brave defence, and perſiſts to the laſt extremity.

The young ones are eaſily tamed: they play with the dogs, and follow the perſon who feeds them: but when taken old, they continue always ſavage. They are neither miſchievous nor ravenous, like the wolf and the fox. They often remain in their holes three or four days together, eſpecially during ſnow. They keep their habitations extremely clean, and never defile them with their ordure. The male is ſeldom found with the female. When about to bring forth, ſhe cuts down herbage, bundles it up, and trails it with her feet to the bottom of her hole, where ſhe makes a commodious bed for herſelf and her young ones. She brings forth in ſummer; and the litter conſiſts of three or four.

It is probable that the badger was quite unknown to the *Greeks*, as it is not mentioned by *Ariſtotle* in his Natural Hiſtory; nor is there any name for it in the *Greek* language. In *Latin* it has two names, *meles* and *taxus*; and in *French* it has two alſo, *blaireau* and *taiſſon*. The circumſtance of a double name has led many to believe that there are two diſtinct ſpecies of the badger in *Europe*; but both *Pennant* and *Buffon* aſſert the contrary. The author laſt mentioned ſays, this ſpecies of quadruped, an original native of the temperate climates of *Europe*, has never ſpread beyond *Spain*, *France*, *Italy*, *Germany*, *Britain*, *Poland*, and *Sweden*; and it is every where very ſcarce. It does not approach to any other ſpecies: its characters are deeply marked, and very ſingular. The alternate belts upon his head are peculiar: his body is nearly white above, and almoſt black below, which is contrary to all other wild animals, whoſe bellies are always of a lighter colour than their backs.

The intermediate variety already hinted at is

The American Badger,

In *Penſylvania* called the Ground Hog. This badger has a white line from the tip of the noſe paſſing between his ears to the beginning of his back, bounded on each ſide with black, as far as the hind part of the head; then by a white one, and, immediately between that and the ears, there is another of long black hair. His back is coloured like that of the common badger; his ſides are yellowiſh, and his belly cinereous; his thighs are duſky; his tail is covered with long dirty yellow hairs, tipped with white; the end duſky.

II.—*The Indian Badger.*

THIS animal has a ſmall head, a pointed noſe, and ſcarcely any external ears, only a ſmall prominent rim round an oval orifice. The colour of its noſe and face a little beyond the eyes, is black: its crown, the upper part of the neck and back, are white, inclining to grey: its legs, thighs, breaſt, belly, and ſides, and the upper part of the tail, are black: it has five toes on each foot; the inner ones are ſmall: its claws are very long and ſtraight: its length is about two feet; the length of its tail is about four inches: its hair is ſhort and ſmooth. It derives its name from the country it inhabits. It is very lively, playful, and good natured. It ſleeps rolled up, with its head between its hind legs. One in the poſſeſſion of Mr. *John Hunter*, *London*, ſome years ago, refuſed all commerce with an *Engliſh* badger that was turned in to it, and lived ſome time in the ſame place. It was wont to climb very readily over a diviſion in its cage, and ſlept very little during the day time.

GENUS XXII.—*The Opoſſum.*

THIS genus has two canine teeth in each jaw; but the number of cutting teeth differs in different ſubjects, and five toes on each foot: thoſe on the hind feet are formed like a hand, with a diſtinct thumb: the tail is very long, ſlender, and uſually naked. There are about eleven ſpecies comprehended under this genus.

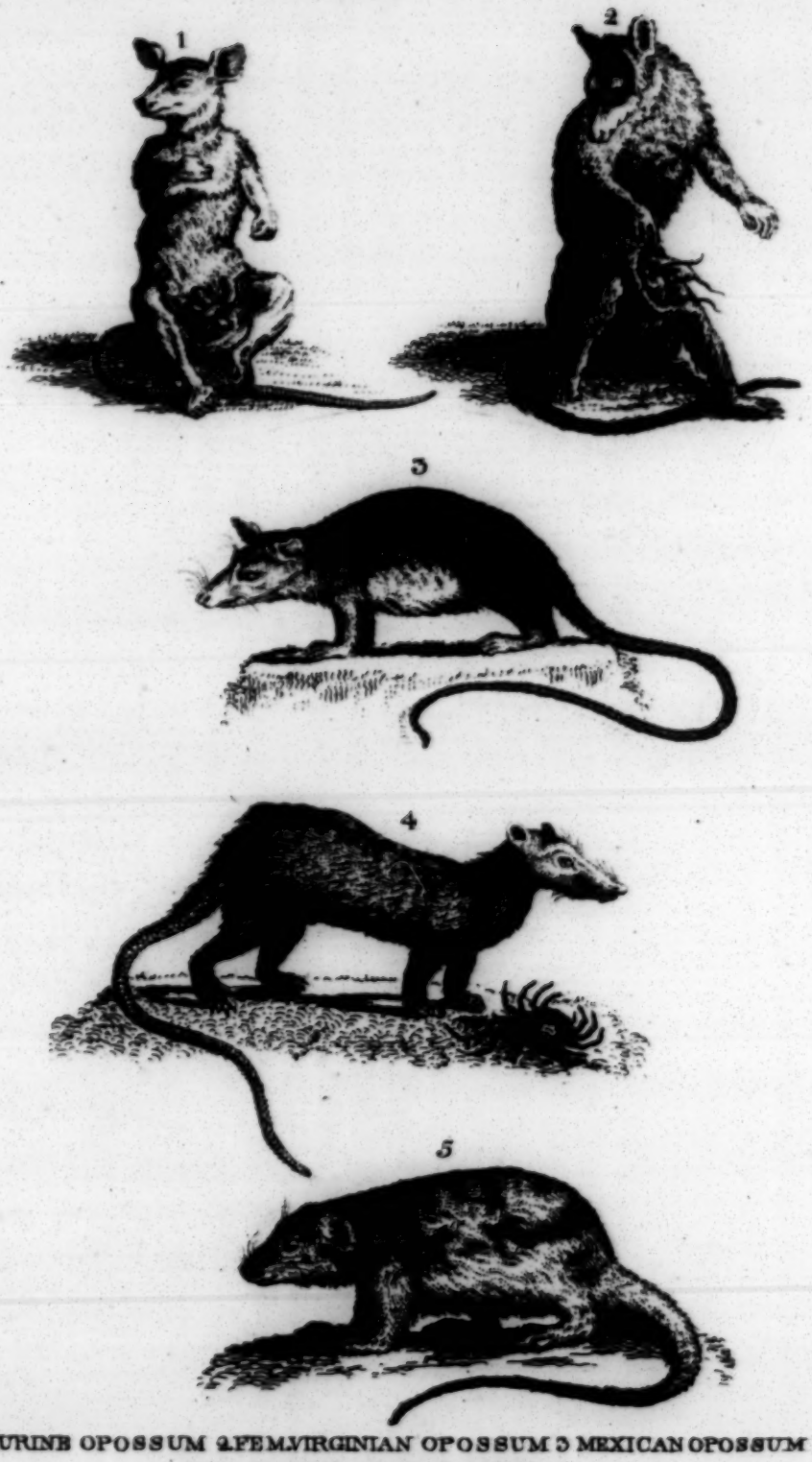
I.—*Virginia Opoſſum* *.

THIS animal has a long ſharp-pointed noſe, large, round, naked, and very thin ears, of a black colour, edged with pure white: it has ſmall, lively black eyes, with long ſtiff hairs on each ſide of its noſe, and behind its eyes: its face is covered with ſhort, ſoft, white hair: the ſpace round its eyes is duſky: its neck is very ſhort; its ſides are of a dirty yellow: the hind part of its neck and its back are covered with hair above two inches long, ſoft, but uneven; having its bottom of a yellowiſh white, the middle part black, and the ends whitiſh: its ſides are covered with dirty-coloured duſky hair; its belly with ſoft, woolly, dirty, white hair; its legs and thighs are black; its feet duſky, and its claws white: the baſe of its tail is clothed with long hair like that on its back; the reſt of the tail is covered with ſmall ſcales; the half next the body is black, the reſt white: it has a diſagree-

able

* The Didelphis Marſupialis of the Syſt. Nat.

Plate XXXII.



1.FEM.MURINE OPOSSUM 2.FEM.VIRGINIAN OPOSSUM 3 MEXICAN OPOSSUM
4. CRAB EATER 5. PHALANGER

able appearance, looking like the body of a ſnake. It has the ſame prehenſile qualities as that of ſome monkies.

Its body is round and very thick, and its legs are ſhort: the female has a large pouch on the lower part of her belly, in which the teats are lodged, and where the young ſhelter themſelves as ſoon as they are brought forth. The uſual length of this animal, when full grown, is about twenty inches; of its tail, twelve. It inhabits *Virginia*, *Louiſiana*, *Mexico*, *Brazil*, and *Peru*. It is very deſtructive to poultry; the more ſo as it ſucks their blood without eating their fleſh. It feeds alſo on roots and wild fruits. It is very active in climbing trees, will hang ſuſpended by its tail, and, by ſwinging its body, fling itſelf among the boughs of a neighbouring tree. It continues frequently hanging by the tail, with its head downwards. It hunts eagerly after birds and their neſts. It walks very ſlow: when overtaken, it will feign itſelf dead; but it is not eaſily kill·d, being as tenacious of life as a cat.

When the female is about to bring forth, ſhe makes a thick neſt of dry graſs, in ſome cloſe buſh, at the foot of a tree, and brings four, five, or ſix young ones at a time. As ſoon as the young are brought forth, they take ſhelter in the pouch or falſe belly, and faſten ſo cloſely to the teats, that they are not to be ſeparated without difficulty. They are ſmall, blind, and naked, when new born, and reſemble fœtuſes; it is therefore neceſſary that they ſhould continue in that receptacle that nature has prepared for them, till they attain perfect ſhape, ſtrength, ſight and hair, and are prepared to undergo what to them may be called a ſecond birth; after which, they run into this pouch, as into an aſylum, in time of danger, and the parent carries them about with her. During the

time of this ſecond geſtation, the female ſhews an exceſſive attachment to her young, and will ſuffer any torture rather than permit the place of their retreat to be laid open; for ſhe has the power of opening or cloſing it, by the aſſiſtance of ſome very ſtrong muſcles. The fleſh of the old ones is very good, like that of a ſucking pig. Their hair is died by the *Indian* women, and wove into garters and girdles; but their ſkins are very fetid.

Mr. *Pennant* ſays, that *Buffon* ſeems not to be acquainted with this animal; but has compiled an account of its manners, and collected the ſynonyms that belong to it. His figures and deſcription both belong to the following ſpecies.

II.—*The Mollucca Opoſſum.*

THIS ſpecies has long, oval, and naked ears: its mouth is very wide: over each eye it has an oblong white ſpot: the lips of its upper jaw, its throat, breaſt, and belly are of a whitiſh aſh-colour; the reſt of its hair is of a cinereous brown, tipt with tawny, and darkeſt on the back: its tail is as long as the body: near the baſe it is covered with hair; the reſt of it is naked: Its claws are hooked. On the belly of the female there is a pouch, like that of the former ſpecies, in which the young ſhelter. *Margrave* found ſix young ones in the pouch of one female: ſhe had ten cutting teeth above, and eight below. The length of the animal is ten inches; its tail exceeds the length of both head and body: its whole figure is of a much more ſlender and elegant make than that of the former.

Its

Its tail pulveriſed, and taken in a glaſs of water, is reckoned, in *New Spain*, a ſovereign remedy againſt the gravel, colic, and ſeveral other diſorders.

This genus is not confined to *America*, as *Buffon* aſſerts: it is frequently found in *Java*, the *Mollucca* iſles, and *New Holland*. This ſpecies is found in great numbers in *Aroe* and *Solor*. It is called in the *Indies*, *Pelandor Aroe*, or the *Aroe* rabbit. They are reckoned very delicate eating, and are very common at the tables of the great, who rear the young in the ſame places in which they keep their rabbits. It inhabits alſo *Surinam* and the hot parts of *America*.

Mr. *Pennant* mentions a larger variety of this ſpecies, called the *Philander Orientalis*, deſcribed by *Seba*, and ſaid to be brought from *Amboina*; but complains, that much is wanted to complete the hiſtory of this genus.

III.—*The Javan Opoſſum.*

THIS ſpecies of the opoſſum has a narrow fox-like head, upright pointed ears, a brown ſtripe paſſing through the eyes, very ſhort fore legs, five toes on the fore feet, three on the hind; two of which are very ſtrong, the outmoſt ſlender and weak.

His tail is thick, and ſhorter than the body.

In the upper jaw are ſix cutting teeth, two in the lower, formed like thoſe of a ſquirrel. They have no canine teeth.

On the belly of the female there is a complete pouch like that of the *Virginia* kind: the hair on the body is coarſe; the face of the animal is ſeemingly that of a hare. They were firſt diſcovered by Mr. *Le Bruyn*, who ſaw, in *Java*, ſeveral of them in an incloſure along with

rabbits: they burrowed like them, but preſerved their young ones in their pouch: the young ones would often peep out when the old ones were ſtill. Specimens of them have been ſent from *Java* to *Holland*.

IV.—*The Kanguroo* *.

THIS curious animal, a native of *New Holland*, has a ſmall head, neck, and ſhoulders; but its body increaſes in thickneſs to the rump: its head is oblong, like that of a fawn, tapering from the eyes to the noſe: the end of the noſe is naked and black, and its upper lip is divided: its noſtrils are wide and open: its lower jaw is ſhorter than the upper: the aperture of its mouth is ſmall: it has whiſkers on both jaws; thoſe on the upper ſtrongeſt: it has ſtrong hairs alſo both above and below its eyes: the eyes are not large; their irides are duſky, and the pupil of a bluiſh black. Its ears are erect, four inches long, oblongly ovated, rounded at the ends, and thin, covered with ſhort hair.

It has no canine teeth. There are four cutting teeth in the upper jaw, and two long lance-like teeth in the lower, pointing forward: there are four grinding teeth in each jaw, remote from the others: its belly is convex, and great: the fore legs are very ſhort, ſcarce reaching to the noſe, and are uſeleſs for walking: the hind legs are almoſt as long as the body, and the thighs are very thick: on the fore feet there are five toes, with long, conic, ſtrong claws; on the hind feet there are only three; of theſe the middle toe is very long and thick, like that of an oſtrich; the two others are placed very diſtinct from

* See Cook's Voyages, Vol. III. 577.

Plate XXXIII.





1. ANONYMOUS ANIMAL. 2. KANGUROO

from it, and are ſmall, with ſhort, thick, blunt claws: the bottom of the feet and their hind parts are black, naked, and tuberculated, as the animal reſts often on them.

Its tail is very long, extending as far as the ears: it is thick at the baſe, and tapers to a point: its ſcrotum is large and pendulous.

The hair on the whole animal is ſoft, and of an aſh-colour, lighteſt on the lower parts. It is about three feet three inches long from the noſe to the tail; the tail meaſures two feet nine.

It inhabits the weſtern ſide of *New Holland*, and has not as yet been diſcovered in any other part of the world. It lurks among the long graſs, feeds on vegetables, and goes entirely on its hind legs; making uſe of the fore feet only for digging, or bringing its food to its mouth. Its dung is like that of a deer. It is very timid: At the ſight of men, it flies from them by amazing leaps, ſpringing over buſhes ſeven or eight feet high, and going progreſſively from rock to rock. When it is in motion, it carries its tail quite at right angles to its body; and, when it alights, it often looks back: it is much too ſwift for grey-hounds to overtake it in the chace; but when ſurpriſed and ſhot, it makes very good eating. A full grown one will weigh upwards of eighty or ninety pounds.

This is a very anomalous animal, very different from any hitherto known; but it is placed here, as having more relation to this genus than to any other. In the form of its legs, it comes very near the preceding ſpecies.

V.—*The Murine Opoſſum* *.

THE Murine opoſſum has long, broad ears, rounded at the extremity, thin and naked: its eyes are encompaſſed with black: the face, head, and upper part of the body, are of a tawny colour; the belly of a yellowiſh white: its feet are covered with ſhort whitiſh hair: its toes are formed like thoſe of the *Virginian* opoſſum; its tail is ſlender, covered with minute ſcales to the very rump: its length from the noſe to the tail is about ſix inches and a half, and the tail the ſame. The female wants the falſe belly; but on the lower parts, the ſkin forms on each ſide a fold, between which the teats are lodged.

This ſpecies varies in colour: ſome in *Guiana* are brown above, and white beneath.

It inhabits the hot parts of *South America*, and agrees with the others in its food and manners, and the prehenſile power of its tail: the female brings from ten to fourteen young at a time; at leaſt, ſhe has ſo many teats. The young affix themſelves to the teats as ſoon as they are brought forth, and remain attached to them, like ſo many inanimate things, till they attain growth and vigour to ſhift a little for themſelves.

Both the *Virginian*, and the *Marmoſe* or *Murine* opoſſum, have each fifty teeth.

* The Didelphis Murina of the Syſt. Nat.

VI.—*The Mexican Opoſſum.*

THIS animal has large, angular, naked, and tranſparent ears: its noſe is thicker than that of the former kind: its whiſkers are very large: a ſlight border of black ſurrounds its eyes: its face is of a dirty white, with a dark line running down the middle: the hair on the head and upper part of the body is aſh-coloured at the roots, but of a deep tawny brown at the tips: Its legs are duſky; its claws white; its belly dull cinereous; its tail is long, and pretty thick, varied with brown and yellow; hairy for about an inch at its origin, the reſt naked. The length of the animal and of its tail are the ſame, each about nine inches: the tail is prehenſile, and ſerves inſtead of a hand.

This ſpecies inhabits the mountains of *Mexico*, and lives on trees, where it brings forth its young. When in any fright, they embrace their parent cloſely; and ſhe carries them along with her wherever ſhe goes.

VII.—*The Cayenne Opoſſum.*

THE *Cayenne* opoſſum has a long, ſlender face, ears erect and pointed, but ſhort: its coat is woolly, but mixed with very coarſe hairs, three inches long, of a dirty white from the roots to the middle, and thence to the ends of a deep brown: its ſides and belly are of a pale yellow; its legs of a duſky brown; it has a thumb on each foot diſtinct from the toes: on the toes of the fore feet, and thumb of the hind, there are nails: on the toes

of

of the hind feet there are crooked claws: its tail is very long, naked, and ſcaly. A young one meaſured above ſixteen inches, and its tail about fifteen. It inhabits *Cayenne*, the country from which it has its name: it is very active in climbing trees, on which it lives the whole day. In marſhy places, on the ſhore, it feeds on crabs, which, when it cannot draw out of their holes with its feet, it hooks them by means of its long tail. If the crab however pinches its tail, a caſe not uncommon, it ſets up a loud cry, which may be heard a great way off. Its common voice is a grunt, like a young pig. It is well furniſhed with teeth, and will defend itſelf ſtoutly againſt dogs. The female brings forth four or five young ones at a time, and ſecures them in a hollow tree. The natives eat theſe animals, and ſay their fleſh reſembles that of a hare. They are eaſily tamed, and will then refuſe no kind of food.

VIII.—*The New Holland Opoſſum.*

THIS ſpecies was found near *Endeavour River*, on the eaſtern coaſt of *New Holland*: it lodges in the graſs, but is not common. Its lenth from the head to the tail, that is, the length of its body, is about thirteen inches; the tail the ſame. The upper part of the head, the back, and ſides, are covered with long, ſoft, gloſſy hairs, of a dark aſh-colour at the bottom, of a ruſty brown towards the ends: the belly is of a dirty white. Its tail is taper, covered with ſhort brown hair, except four inches of the end, which ſpace is white, and naked underneath.

Its toes are like thoſe of the former ſpecies.

IX.—*The Short tailed Opoſſum.*

THE ſhort tailed opoſſum has naked ears: its back is of a dull red, the belly paler. The tail is ſcarce half the length of the body; it is thick at the baſe, and tapers toward the end. It has no falſe belly; but the young, as ſoon as they are brought forth, adhere to the teats of their mother. *Seba* ſays, ſhe produces ten or twelve at a time.

It inhabits *South America*, and lives in the woods.

X.—*The Phalanger Opoſſum.*

THIS ſpecies of the opoſſum has a thick noſe, and ſhort ears, covered with hair. It has eight cutting teeth in the upper jaw, and two in the lower. The hair on the upper part of the body is reddiſh, mixed with light aſh-colour and yellow. The hind part of the head, and the middle of the back, are marked with a black line: the throat, belly, legs, and part of the tail, are of a dirty yellowiſh white: the reſt of the tail is brown and yellow: the body of the female is marked with white: the firſt and ſecond toes of the hind feet are cloſely united: the claws are large: the thumb on the hind feet is diſtinct, like that of the other ſpecies: the bottom of the tail is covered with hair for near two inches and a half; the reſt of it is naked. The length of the animal, from the noſe to the tail, is near nine inches. Dr. *Pallas* ſays that this ſpecies inhabits the *Eaſt Indian* iſlands; but that it is not found in *Surinam*, as *Buffon* conjectures.

XI.—*The Merian Opoſſum* *.

THIS animal derives its name from *Sibilla Merian*, a *German* paintreſs, who firſt diſcovered and drew the figure of this ſpecies at *Surinam*. The *Merian* opoſſum has long, ſharp-pointed, naked ears: its head and body are of a yellowiſh brown colour: its belly is white, tinged with yellow: its fore feet are divided into five fingers, the hind ones into four fingers and a thumb, each furniſhed with flat nails. Its tail is very long and ſlender; and, except at the baſe, quite naked. The length of the animal, from the noſe to the tail, is ten inches; the tail exceeds the length of both the body and the head. It inhabits *Surinam*, and burrows under ground. The female brings five or ſix young at a time, which follow her; but on any apprehenſion of danger, they all jump on her back, and, twiſting their tails round her's, keep faſt hold; and ſhe immediately runs with them into her hole.

The ſeveral ſpecies already enumerated, belonging to this genus, require a warmer climate than that of *Britain*, and conſequently cannot be propagated here; yet, as there are various peculiarities attending their hiſtory, it may be both amuſing and inſtructive. *Buffon* thinks particular attention ought to be beſtowed on ſome of them, in order to inveſtigate and aſcertain a better method than any yet in uſe, of treating premature births of the human ſpecies.

* The Didelphis Dorſigera of the Syſt. Nat.

GENUS XXIII.—*The Weaſel.*

THE generic characters of the weaſel are ſix cutting, and two canine teeth in each jaw; a ſharp noſe; a ſlender body; and five toes on each foot.

Inſignificant as this genus may appear, there are no fewer than thirty-four ſpecies, and ſome ſubordinate varieties, comprehended under it. Our aim is to be as conciſe as poſſible, but to omit nothing neceſſary.

I.—*The Common Weaſel* *.

THE weaſel has ſmall rounded ears: the whole upper part of its head and body is of a pale tawny brown; the under ſide is entirely white: it has a brown ſpot beneath the corners of its mouth: its length from noſe to tail is between ſix and ſeven inches; its tail meaſures two and a half. *Buffon* ſays, it is tipt with yellow, even when the colour of the body is wholly changed to white, which is the caſe in cold climates, and ſometimes even in this country, as well as in *France*, during the winter.

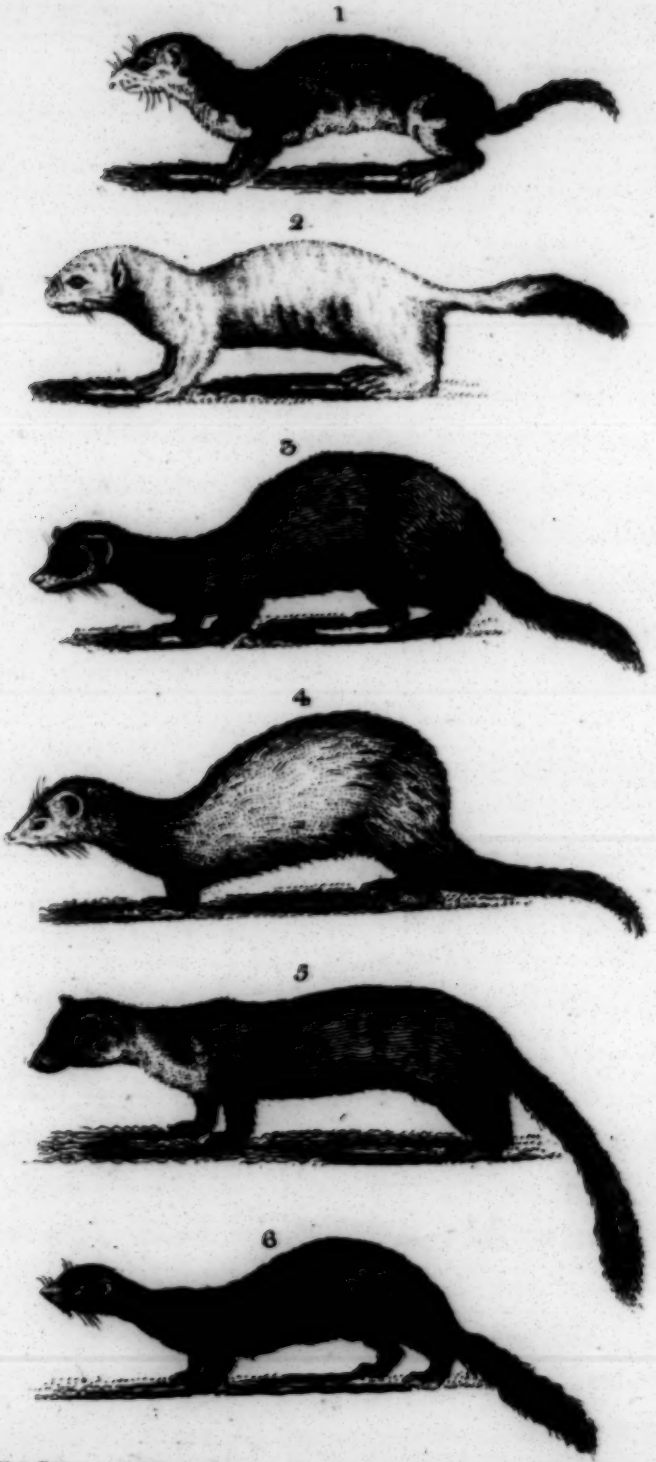
It is common in the temperate and warm climates, but rare in the northern regions; yet it inhabits moſt parts of *Europe*, and is common in *Siberia*, as far as *Kamſchatka*.

* The Muſtela Nivalis of the Syſt. Nat. Γαλη in Greek; La Belette in French; in Yorkſhire, the Fitchet or Foumart; in Scotland, the Whitered, Whiret, or Whitrick. The pole-cat is called a Foomart in Scotland.

It is met with in *North America*, even as high as *Hudſon's Bay*: it is found alſo in *Barbary*. The weaſel dwells not, like the ermine, in woods and deſerts, but near the habitations of men: it is very deſtructive to chickens, birds, and young rabbits and hares; it is alſo a great devourer of eggs. It does not eat its prey on the ſpot; but after killing it, by a bite near the head, it carries it off to the place of its retreat, where it eats it during the night. It is very active, climbs trees, and runs up the ſides of walls with great eaſe: no place is ſecure from its ravages: it frequents out-houſes, barns, and granaries: it is a great enemy to rats and mice, and ſoon clears its haunts from thoſe pernicious animals. As it can follow them to all their holes and haunts, one weaſel will do more execution than many cats: In ſome parts of the country, people think their bite venomous, and ſuppoſe their breath dangerous to cattle: when the cattle ſwell much, they ſay they are *weaſel-blown*. The female brings four or five young ones at a time; theſe, like the young of many other quadrupeds, are brought forth blind. By proper management they may be tamed, and will become familiar, careſſing, and frolicſome, as a dog or a ſquirrel. Their ordure is never offenſive, but when they are irritated. They are fed with milk, boiled fleſh, and water: They move with caution and with ſilence, and never cry but when they are hurt: their cry is ſharp and rough, and very expreſſive of reſentment: they attack ſerpents, water-rats, and moles: over-running meadow grounds, they devour quails and partridges, together with their eggs.

Their excrements and ſkins are intolerably fetid. In *Norway*, *Sweden*, *Ruſſia*, and *Siberia*, they always change to white at the approach of winter. The ſkins of thoſe

Plate XXXIV



1. WEASEL 2. ERMINE 3. POLE CAT 4. FERRET
5. MARTIN 6. VISON

of *Siberia* are ſold to the *Chineſe* for three or four rubles the hundred.

II.—*The Stoat* or *Ermine* *.

THIS ſpecies is, in moſt reſpects, ſimilar to the former, only it is larger, meaſuring ten inches in length: its tail, which is always tipt with black, five and a half: It is found in the north of *Europe* and *Aſia*. It is the ſpecies moſt frequently met with in ſome parts of *Scotland*; and Mr. *Pennant* ſays, that in 1780 he ſaw, in his own grounds, two in the ſtate of the moſt perfect and beautiful ermines. They become entirely white at the approach of winter, the tail excepted, and reſume their brown colour in the ſpring.

They are met with alſo in *Newfoundland* and *Canada*: their ſkins are a great article of commerce in *Norway* and *Siberia*. In the latter country, they are found in plenty, in birch foreſts; but there are none in thoſe of fir or pine. Their ſkins bring, on the ſpot, from two to three pounds *per* hundred. In *Norway* they are taken in traps, baited with fleſh: in *Siberia*, they are either ſhot with blunt arrows, or taken in a trap made of two flat ſtones, propped by a ſtick, to which is faſtened a baited ſtring, which, on the leaſt touch of the animal, falls down and kills it.

Pontoppidan in his hiſtory of *Norway* ſays, that the furs of *Norway* and *Lapland* are better than thoſe of *Ruſſia*, which ſooner turn yellowiſh; and for this reaſon the former are in greater requeſt, even at *Peterſbourgh*. The

* The Muſtela Erminea: when white, the Mus Ponticus of Pliny. In France, in ſummer, it is Le Roſelet, in winter, L'ermine.

The ermine catches mice like the cat; and, when practicable, carries off his prey. He is particularly fond of eggs; and when the ſea is calm, he ſwims over to the iſlands which are near the coaſt of *Norway*, where there are vaſt qnantities of ſea-fowls. It is alleged, that when the female brings forth in an iſland, ſhe conducts her young to the continent upon a piece of wood, piloting them with her noſe. This animal, though ſmall, kills thoſe of a much larger ſize, as the rein-deer and bear: he jumps into one of their ears when they are aſleep, and adheres ſo faſt by his teeth and claws, that thoſe creatures cannot diſengage him. He likewiſe ſurpriſes eagles and heath-cocks, by fixing on them, and never quitting them, even when they mount in the air, till the loſs of blood brings them to the ground.

III.—*The South American Fitchet.*

THIS is a weaſel with a long ſharp noſe: its cheeks, its throat, and the ſides of its neck, are black: its forehead, and the ſides of its head, to its ears, are white: its ears are ſhort, round, and edged with white: from each ear a narrow ſtripe extends along the ſides of its neck. Its body is covered with coarſe hair, grey at the baſe, black and white at the ends: its legs and feet are black, tinged with red: its toes are not unlike thoſe of a rat. The length of the animal is above twenty-one inches: its tail is buſhy, of a bright cheſnut, mixed with white; it is rather ſhorter in proportion than the *Engliſh* fitchet, to which it bears a near reſemblance. It inhabits *Guiana*.

IV.—*The Fitchet* or *Pole-cat.*

This is an animal, common, well known, and eaſily diſtinguiſhed. There is a proverbial expreſſion, *I ſmell a rat*; but any one coming near it may ſoon ſmell a pole-cat, as it is exceſſively fetid.

He has a white ſpace round the mouth: the tips of his ears are alſo white: his head, body, and legs, are of a chocolate colour, almoſt black: his ſides are of a tawny caſt, and his tail is black: his body meaſures ſeventeen inches, his tail ſix. It inhabits moſt parts of *Europe*: it is common in the temperate parts of *Ruſſia*, but grows ſcarcer in *Siberia*, except in the deſert of *Baraba*, and beyond the lake *Baikal*: none are found north of thoſe places: there they are uſually found with white or yellowiſh rumps, bounded with black.

The fitchet burrows under ground, forming a ſhallow retreat, about two yards in length, generally terminating under the roots of ſome large tree. It ſometimes forms its lodgings under hay ricks, and in barns: it avoids the cold; its ſteps are never ſeen in the ſnow, either in the woods or in the fields: it is never found in warm climates; ſo that it ſeems to ſhun both extremes. In winter, it frequents houſes, and will rob the dairy of milk: it preys on poultry, game, and rabbits: a ſingle family of pole-cats is ſufficient to deſtroy a whole warren: they are alſo very fond of honey: they attack bee-hives in the winter, and force the bees to abandon them. They climb trees in queſt of the neſts of birds; ſo that neither eggs nor birds are ſafe from their ravages, high or low. The ſpring is their ſeaſon of love. The males fight for the female: they afterwards leave her, and go to paſs the ſummer in the fields or woods; ſhe, on the contrary, continues

continues in her habitation till ſhe bring forth: the female brings five or ſix young at a time. The time of geſtation of this and the former ſpecies is ſaid to be eight weeks. Their ſkins are dreſſed with the hair on, and uſed, as other furs, for tippets, &c.; they are alſo ſent abroad to line clothes.

V.—*The Sarmatian Weaſel.*

THIS ſpecies has broad, ſhort, round ears, edged with long white hairs: its mouth alſo, like that of the former ſpecies, is ſurrounded with white: its head, feet, and the under ſide of its body, are quite black: its head is croſſed beyond each eye with a white band, paſſing beneath the ears along the ſides of the neck, and down to the throat: from the hind part of the head another band of yellow paſſes on each ſide obliquely towards the ſhoulders; above is a third: The upper part of the body is of a browniſh black, ſtriped and ſpotted irregularly with obſcure yellow: its tail, about ſix inches long, is duſky, with longer white hairs intermixed, but wholly black at the end. The animal is about fourteen inches long.

It inhabits only *Poland* and the ſouthern provinces of *Ruſſia*; in *Aſia*, the mountains of *Caucaſus*, *Georgia*, and *Bucharia*. It is a moſt voracious creature, feeding on the marmots, mice, and leſſer animals, where it reſides. It ſeizes its prey, and firſt ſucks out the blood. Unlike the former ſpecies, it does not meddle with eggs. It lives uſually in holes made by other beaſts; but is not incapable of digging a burrow for itſelf. It ſleeps little, preys by night, and is very fierce and untameable: its eyes are of a flaming brightneſs; it is very active, and moves by frequent jumps: its ſmell is very fetid, eſpecially when

it

it erects its tail, which it does when it is angry. It copulates in the ſpring; goes two months, and brings from four to eight young ones, according to the report of the natives.

VI.—*The Siberian Weaſel.*

THIS weaſel has a black face, whitiſh about the noſtrils, and ſpotted towards its eyes; the reſt of the animal is of a deep yellow, nearly approaching to fox or orange colour: its throat is ſometimes ſpotted with white: its tail is very buſhy, and of a deeper colour than the body: its hair in general is looſe and long, and the ſoles of its feet are deeply covered with fur: its body is more ſlender than that of the fitchet or pole-cat, and approaches nearer to the form of the ſtoat: its length is about twelve inches, its tail ſix.

It begins to appear in the *Altaic* mountains, between the *Oby* and the *Irtiſh*; from whence it is common on wooded mountains, to the *Amur* and the lake *Baikal*. In its haunts, manners, and food, it has a great reſemblance to the *Sable*; but it does not extend ſo far north.

VII.—*The Ferret* *.

THIS ſpecies of the weaſel has a ſharp noſe, red and fiery eyes, and round ears: the colour of its whole body is a very pale yellow: it meaſures about fourteen inches, and its tail only five.

* The Muſtela Furo of the Syſt. Nat. The Viverra of Pliny.

In its wild ſtate it inhabits *Africa*; from whence it was originally brought into *Spain*, to free that country from the multitudes of rabbits with which that kingdom was over-run; and from thence the reſt of *Europe* was ſupplied with it. It is a lively, active animal, and the natural enemy of rabbits. Whenever a dead rabbit is preſented for the firſt time to a young ferret, he flies upon it, and bites it with fury; but if it be alive, he ſeizes it by the throat or the noſe, and ſucks its blood. When let into the burrows, they are muzzled, that they may not kill the rabbits in their holes, but oblige them to come out. Boys likewiſe uſe the ferret for catching birds in the holes of walls or old trees. It ſucks the blood of its prey, but ſeldom tears it: it breeds in our climate, and brings from five to nine young ones; but it is apt to degenerate, and loſe its ſavage nature. The keepers of rabbit-warrens are therefore obliged to procure an intercourſe between the female ferret and a pole-cat, by leaving it near the haunt of the latter. The produce is a breed of a much darker colour than the ferret, partaking more of that of the pole-cat. The ferret has the ſame diſagreeable ſmell as that animal.

VIII.—*The Martin* *.

THIS ſpecies of the weaſel has broad rounded ears, and lively eyes: its head is brown, with a tinge of red: its body, ſides, and legs, are covered with hair, aſh-coloured at the bottom, bright cheſnut in the middle, and tipped

* The Muſtela Martes of the Syſt. Nat. La Fouine of Buffon, who ſuppoſes, that either this or the pole-cat may be the *Ἰκτὶς* of Ariſtotle, though he cannot determine which of them.

tipped with black: its throat and breaſt are white: its belly is of a deep brown: its tail is buſhy, of a duſky colour: its feet are broad, covered at the bottom with thick down: its claws are white: its length eighteen inches; its tail ten.

It inhabits moſt parts of *Europe*, even to the warmer parts of *Ruſſia*, but does not extend far eaſt in that empire. It is a moſt elegant, lively animal, capable of being tamed, good natured, and ſportive. It lives in woods, and breeds in hollow trees: it brings from four to ſix young ones at a time. During winter, it frequently ſhelters itſelf in a magpie's neſt. It deſtroys poultry and game, and will eat rats, mice, and moles, is alſo very fond of honey, and prefers hemp-ſeed to every other kind of grain. Its ſkin and excrements have a muſky ſmell. Their fur is of ſome value, and is uſed to line the robes of magiſtrates.

IX.—*The Pine Weaſel* or *Yellow Breaſted Martin.*

THIS ſpecies is diſtinguiſhed by a yellow breaſt and throat: its hair is of a dark cheſnut colour, and is far ſuperior in fineneſs to that of the former ſpecies: in other reſpects it agrees with it.

It inhabits the north of *Europe*, *Aſia*, and *America*; it is found alſo in *Great Britain*, but in no part of *Siberia*. It reſides in large foreſts, eſpecially thoſe of pines, but never lodges near houſes, as the other ſpecies are ſaid to do. It brings two or three young at a time. Its prey is much the ſame with that of the former; but its fur is of far greater value. The peninſula of *Kamſchatka* and *North America* abound with them. Their ſkins furniſh a prodigious article of commerce. Thoſe

found about *Mount Caucaſus*, with an orange throat, are eſteemed the fineſt.

X.—*The Sable.*

This ſpecies, highly valued for its fine fur, has long whiſkers, round ears, large feet, white claws, and a long and buſhy tail: The colour of its hair is black at the tips, cinereous at bottom; its chin is cinereous, ſometimes white, yellow, or ſpotted; the edges of its ears are alſo yellowiſh. Sometimes its hair has a tawny caſt; for in the ſpring, after changing its coat, its colour varies. There are inſtances of ſome being found of a ſnowy whiteneſs. In ſize, it is equal to that of the martin, which it alſo very much reſembles in form; but there is one ſpecific diſtinction worthy of notice; the tail of the *martin* is much longer than the hind legs, when extended; that of the ſable is ſhorter. It inhabits *Siberia*, *Kamſchatka*, and the *Kurile* iſles, between *Kamſchatka* and *Japan*. There are none to be found weſt of the *Urallian* mountains; but they increaſe in numbers as you advance thence to the eaſtward. They live in holes in the earth, or under the roots of trees. Like the martin, they form neſts in the trees, and will leap with great agility from one tree to another. They are very lively, and much in motion during the night, but ſleep much in the day. They prey, during ſummer, on ermines, weaſels, and ſquirrels; but above all, on hares; in winter, on birds; in autumn, on hurtle-berries, cranberries, and the berries of the ſervice-tree; but in that ſeaſon their ſkins are at the worſt; as that kind of diet, it

[a] The Muſtela Zibellina of the Syſt. Nat. La Zebeline de Buffon.

it is ſaid, cauſes them to itch, and to rub off their fur againſt the trees. They bring forth at the end of *March* or beginning of *April*, and have from three to five at a time, which they ſuckle for four or five weeks. Their excrements are moſt exceſſively fetid.

In the more barbarous times of the *Ruſſian* empire, the hunting of theſe animals was the employment, or rather the taſk, of thoſe unhappy exiles that were ſent into *Siberia*. As that country is now become more populous, the ſables have, in a great meaſure, quitted it, and retired further north and eaſt, to live in deſert foreſts and mountains. They uſually reſide on the banks of rivers, or on the little iſlands in them.

At preſent, the ſable hunters form themſelves into parties or troops, from five to forty each: the laſt ſubdivide into leſſer parties, and each chooſes a leader; but there is one commander in chief that directs the whole. A ſmall covered boat is prepared for each party, laden with proviſion, a dog and a net for every two men, and a veſſel to bake their bread in. Each party has alſo an interpreter for the country they intend to penetrate. Every party then ſets out, according to the courſe their leader points out. They aſcend the rivers, drawing up their boats, till they arrive in the hunting country. There they ſtop, build huts, and wait till the waters are frozen, and the ſeaſon commences. Before they begin the chace, their leader aſſembles them; they join in a prayer to the Almighty for ſucceſs, and then ſeparate. The firſt ſable each party takes is called *God*'s ſable, and is dedicated to the church.

They then penetrate into the woods, and mark the trees as they advance, that they may know their way back. In their hunting-quarters they form huts of trees, and bank up the ſnow around them. Near theſe they lay

lay their traps; then advance farther, and lay more traps; ſtill building new huts in every quarter, and returning ſucceſsfully to every old one, to viſit the traps, and to take out the game, and to ſkin it, which none but the chief of the party muſt do. During this time they are ſupplied with proviſions by perſons who are employed to bring it on ſledges from the places on their route, where they are obliged to form magazines. The traps are a ſort of pit-falls, with a looſe board placed over each, baited with fiſh or fleſh. When ſables grow ſcarce, the hunters trace them on the new fallen ſnow to their holes, place their nets at the entrance, and ſometimes wait, watching, two or three days, for the coming out of the animal. It has happened that theſe poor people have, by the failure of their proviſions, been ſo pinched with hunger, that, to prevent the cravings of appetite, they have been reduced to take two thin boards, one of which they apply to the pit of the ſtomach, the other to the back, drawing them tight together by cords placed at the ends. Such, ſays Mr. *Pennant*, are the hardſhips our fellow-creatures undergo, to ſupply the wantonneſs of luxury!

The ſeaſon of chace being finiſhed, the hunters re-aſſemble, report to their leader the number of ſables each has taken, make complaints of offenders againſt their regulations, puniſh delinquents, and ſhare the booty. They then continue at the head-quarters till the rivers are clear of ice; when they return home, and give to every church the dedicated furs.

The price of theſe furs varies from one to ten pounds Sterling, and above. Fine and middling ſkins are ſold without the bellies; the coarſe ones with them. The fineſt ſables are ſold in pairs perfectly ſimilar; and ſuch pairs are dearer than ſingle ones of the ſame goodneſs; for

for the *Ruſſians* want thoſe in pairs for facing caps, cloaks, and tippets. The blackeſt are reputed the beſt. Sables are in ſeaſon from November to February: Thoſe caught at any other time of the year are ſhort haired. The hair of ſables differs in length and quality: The long hairs, which reach far beyond the inferior ones, are called *Os*. The more a ſkin has of ſuch long hairs, and the blacker they are, the more valuable is the fur. The very beſt have no other but thoſe long black hairs. Below the long hairs there are, in the greater part of ſable furs, ſome ſhorter, called *Podoſie* or *Under Os*. The more podoſie a fur has, the leſs valuable it is. Between the *os* and *podoſie* there is a low woolly kind of hair called *Podſada*. The more podſada a fur has, the leſs valuable it is reputed; for the long hair will, in that caſe, take no other direction than the natural one: But the character of ſables is, that notwithſtanding the hair lies from the head towards the tail, yet it will lie in any direction you ſtrike your hand over it. Beſide various other particulars reſpecting the fur, the furriers attend much to the ſize, always preferring, *caeteris paribus*, the biggeſt, and thoſe that have the greateſt gloſs. The gloſs vaniſhes in old furs: the freſh ones have what dealers in furs call a *bloomy* appearance; the old ones are ſaid to have done *blooming*. The dyed ſables always loſe their gloſs, and become leſs uniform, whether the lower hairs have taken the dye or not; and the hairs are commonly twiſted or criſped, and not ſo ſtraight as the natural ones. Some fumigate the ſkins to make them look blacker; but the ſmell, and the criſped condition of the long hair, betrays the cheat: but dying and fumigating are both detected, by rubbing the fur with a moiſt linen cloth, which grows black in ſuch caſes. The *Chineſe*, however, have a way of dying the ſables, ſo that the colour not only laſts,

which

which is more than the *Ruſſian* cheats can effect; but the fur keeps its gloſs, ſo that the fraud can only be detected by the criſped hairs.

The country about the river *Ud* affords ſometimes ſables, of which one is often ſold for twelve or fourteen pounds Sterling. The bellies of ſables, which are ſold in pairs, are about two fingers breadth, and are, like the ſkins, tied together in parcels of forty each. One of theſe parcels ſells from one to two pounds Sterling: tails are ſold by the hundred; the very beſt furs muſt have their tails, but ordinary ones are often cropped. A hundred ſells for from four to eight pounds. White ſables are rare: they are not common merchandize, but bought only as curioſities. Some are yellowiſh, and are bleached in the ſpring on the ſnow. The common ſables are ſcarcely any thing better in hair and colour than the martin.

The ſable is alſo found in *North America*. The *Ruſſians* have often diſcovered the ſkins mixed with thoſe of martins in the fur dreſſes, which they get from the *Americans* by way of exchange. Their fur is more gloſſy than that of the *Siberian* ſable, and of a bright cheſnut colour, but of a coarſer quality.

The length of the *American* ſable is about twenty inches; the trunk of the tail is only five; but from the rump to the end of the hairs eight. His ears are more pointed than thoſe of the *Aſiatic* ſable: its feet are large and hairy, both above and below: it has five toes, with white claws on each foot. The colour of its head and ears is whitiſh: its whiſkers are ſhort and black; its whole body of a light tawny; its feet are brown.

XI.—*The Fiſher.*

THIS ſpecies, notwithſtanding its name, is not amphibious. It has a black noſe, ſtrong and ſtiff whiſkers; ſix ſmall weaſel-like teeth above and below: it has ſix large canine teeth; four grinding teeth in each upper jaw: three of theſe are ſharp pointed, the fourth flat; in the lower jaw ſix, the laſt flatted, the next with three points, the next to thoſe with two: its ears are round, duſky on their outſides, but edged with white: its face and the ſides of its neck are of a pale brown, or aſh colour, mixed with black: its back, belly, legs, and tail, are black; but the roots of the hair are brown; its ſides are brown; its feet very broad, covered with hair even on their ſoles: it has five toes on the fore feet, on the hind feet generally four, but ſometimes five, with ſharp, ſtrong, and crooked white claws: its fore feet are longer than thoſe behind; its tail is full and buſhy, ſmalleſt at the end, ſeventeen inches long. The length of the animal itſelf is twenty-eight inches.

It inhabits *North America*; above five hundred ſkins are brought in a ſeaſon from *New York* and *Pennſylvania*. Many of theſe vary in colour.



XII.—*The Madagaſcar Weaſel.*

THIS ſpecies is the *vanſire* of *Buffon*. It has ſhort ears: The hair on its whole body is brown at the roots, and barred above with black and a ruſt colour; as is alſo the tail, which is near ten inches long.

The animal itſelf is about fourteen inches in length; it inhabits *Madagaſcar*; whence it has its name.

XIII.—*The Pekan Weaſel.*

THE *Pekan* has very long and ſtrong whiſkers, and his ears are a little pointed. The hair on his head, back, and belly, is cinereous at the roots, of a bright bay at the ends, and is very ſoft and gloſſy: there is a tinge of grey on the ſides, and between the fore legs a white ſpot: the legs and tail are black: its toes, armed with ſharp claws, are covered with thick hair, both above and below. In form, it reſembles the martin. Its length is one foot ſeven inches: the length of its tail about eleven. It is an inhabitant of *North America*.

XIV.—*The Viſon Weaſel.*

BOTH this and the former ſpecies bear the ſame name in the works of the *Count de Buffon*. The viſon has rounded ears, brown hair tinged with tawny, very bright and gloſſy, with a thick aſh-coloured down beneath, tipt with ruſt colour. Its legs are very ſhort; its tail duſky. Its own length is about ſeventeen inches, its tail nine. It alſo inhabits *North America*.

XV.—*The White-cheeked Weaſel.*

Mr. Pennant deſcribed this ſpecies from a living animal at *London* in 1774, but could not learn which was its native country. It had rounded ears, a broad and blunt noſe, duſky irides, and a flat head. Its face, crown, legs, rump, and tail, were black; its chin and cheeks white; its throat of a rich yellow; its back and belly were of a pale yellow, intimately mixed with aſh colour. Its body was eighteen inches long; its tail was of the ſame length, covered with long hair.

XVI.—*The Griſon Weaſel.*

This ſpecies has a large head and eyes, and ſhort, but broad ears. The upper part of its body is of a deep brown, each hair being tipped with white, which gives it a hoary look. From each ſide of the forehead extends a broad white line, paſſing over the eyes, and reaching as far as the ſhoulders: its noſe, throat, and the whole under ſide of its body, its thighs and legs, are black. Its length ſeven inches; its tail is a little more than half the length of the body.

It inhabits *Surinam*; but is a very ſcarce animal.

XVII.—*The Guinea Weaſel.*

This ſpecies has the upper jaw much longer than the under. Its eyes are placed mid-way between its ears

and the tip of its noſe. Its ears are like thoſe of the human ſpecies; its tongue is rough: its tail declines downward, and grows leſs toward the point: its feet are ſtrong, and formed for digging. The ſhape of its body is like that of a rat. It is of the ſize of a ſmall rabbit, of a duſky colour: Its hair is rough.

It is common about the negro ſettlements in *Guinea*; burrows like a rabbit, and is very fierce: when driven to neceſſity, it will fly at man or beaſt. It is very deſtructive to poultry.

XVIII.—*The Guiana Weaſel.*

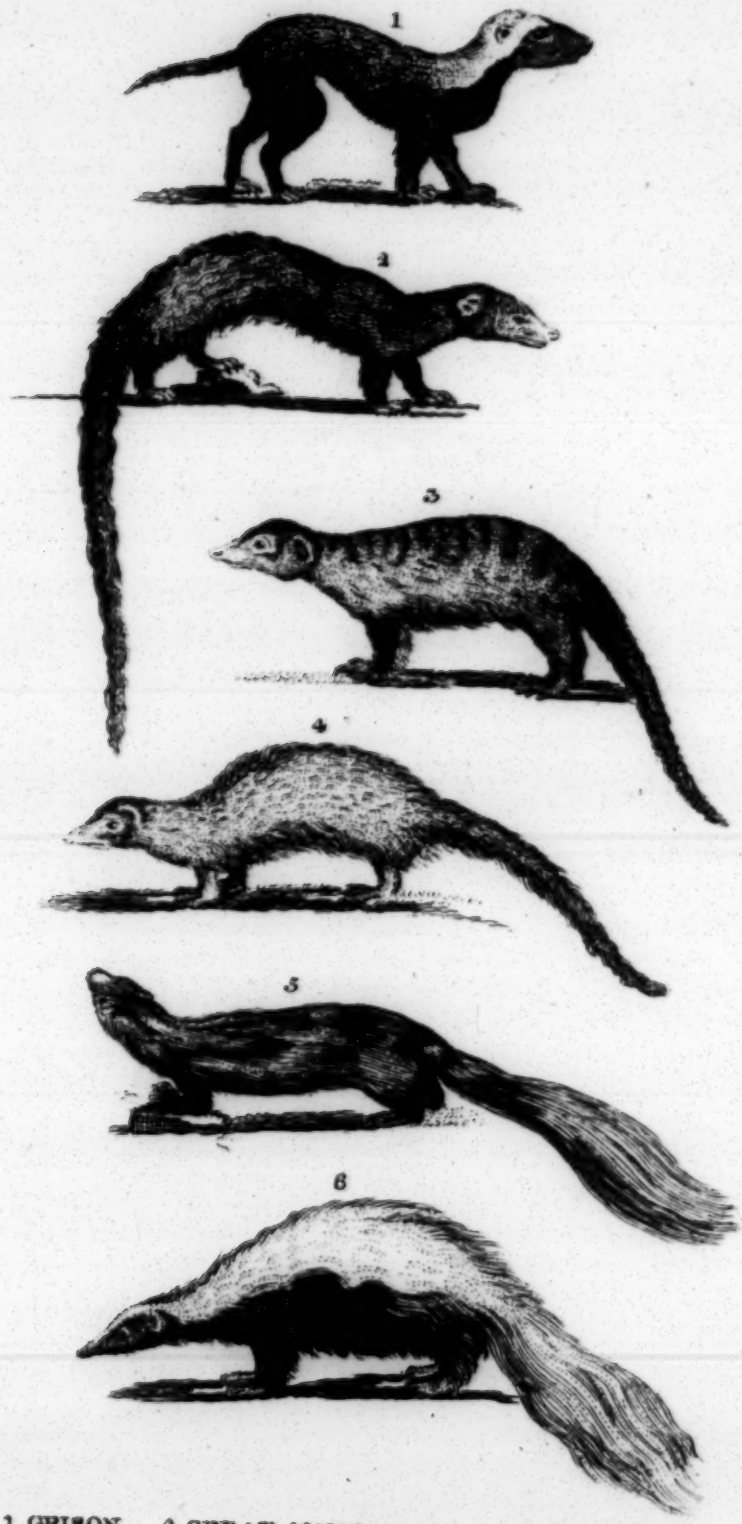
This is the *muſtela barbara* of *Linnæus*. It has round ears, covered with down, an aſh-coloured ſpace between its eyes, and a trilobated ſpot on the lower part of its neck. It is of a black colour, of the ſize of a martin: its hair is coarſe. It inhabits *Brazil* and *Guiana*. When it rubs itſelf againſt the trees, it leaves an unctuous matter, that ſcents of muſk.

XIX.—*The Woolly Weaſel.*

This ſpecies has a long ſlender noſe, the upper jaw longer than the lower; very ſhort and round ears, its body covered with woolly hair, and a tail, above eight inches long, tapering to a point. Its body meaſures between fifteen and ſixteen inches. Mr. *Pennant* copies *Buffon* in this article, at the ſame time that he acknowledges he has ſome doubts whether it be not of the ſame ſpecies with the former.

Buffon ſays it inhabits *Guiana*.

Plate XXXV



1. GRISON 2. GREAT MANGOUSTE 3. MANGOUSTE
4. NEMS 5. ZORILLE 6 CHINCH

XX.—*The Ichneumon* *.

THIS ſpecies of the weaſel, frequently called *Pharaoh*'s *rat*, has bright, flame-coloured eyes; ſmall rounded ears, almoſt naked; a long and ſlender noſe; but a thicker body than others of this genus. Its tail is very thick, and tapers to a point: its legs are ſhort; its hair hard and coarſe; the colour is various in different animals of this ſpecies from different countries. Some are alternately barred with a dull yellowiſh brown and white; others are of a pale brown or mouſe-colour, and appear mottled. The throat and belly are of a uniform brown. Beneath the tail it has an oriſice not unlike that of a badger. Mr. *Pennant* mentions a ſpecimen in the *Aſhmolean* Muſeum, that meaſured thirteen inches and a half to the origin of the tail, and the tail itſelf eleven; but the *Egyptian* variety is the largeſt. Some of theſe meaſure forty two inches, from the point of the noſe to the extremity of the tail.

It inhabits *Egypt*, *Barbary*, *India*, and its iſlands, and is a moſt uſeful animal, being the inveterate enemy of ſerpents, and of other noxious reptiles that infeſt the torrid zone. It attacks without dread that moſt fatal of ſerpents, the Naja, or Cobradi Capello; and ſhould it receive a wound in the combat, it inſtantly retires, and is ſaid to obtain an antidote from a certain herb †; after which

* Ιχνευμων of Ariſtotle; the Ichneumon of Pliny; the Meles Ichneumon of Haſſelquiſt; La Mangouſte of Buffon; the Viverra Ichneumon of the Syſt. Nat.

† Botaniſts are not yet agreed about the ſpecies of this ſanative plant, whoſe uſe, it is pretended, this weaſel pointed out to mankind. All that ſeems certain is, that the Indians have a plant, of whoſe *alexipharmic* virtues

which it returns to the attack, and ſeldom fails of a victory. It is a great deſtroyer of the eggs of the crocodile, which it digs out of the ſand; and even kills multitudes of the young of thoſe terrible reptiles: it was not therefore without reaſon, that the ancient *Egyptians* ranked the Ichneumon amongſt their deities. It is at preſent domeſticated, and kept in houſes in *India* and *Egypt*. It is alſo more uſeful than a cat, in deſtroying rats and mice. It eaſily worries a cat, though larger and ſtronger than itſelf, and declines not the combat even with the dog. It grows very tame, and is very active. It ſprings with great agility on its prey, and will glide along the ground like a ſerpent, and ſeem as if without feet: it immediately catches any thing that is flung to it. It is a great enemy to poultry, and will feign itſelf dead till they come within its reach. Like the cat, it is a great lover of fiſh. After ſucking out the blood, it draws its prey to its hole. When it ſleeps, it brings its head and tail under its belly, and appears like a round ball, with two legs ſticking out. *Rumphius* obſerves how ſkilfully it ſeizes the ſerpents by the throat, ſo as to avoid receiving any injury; and *Lucan* beautifully deſcribes the ſame addreſs of this animal in conquering the *Egyptian* aſp.

Aſpidas ut Pharias cauda ſolertior hoſtis
Ludit, et iratas incerta provocat umbra:
Obliquanſque caput vanas ſerpentis in auras,
Effuſæ toto comprendit guttura morſu
Letiferam

tues they have a very high opinion, and are ſaid to uſe it with ſucceſs againſt the dreadful Macaſſar poiſon, and the bite of ſerpents. Kæmpfer ſays he had good ſucceſs with one ſpecies, in putrid fevers, and found it infallible for the bite of a mad dog. As there is no doubt but a moſt uſeful plant of this nature does exiſt in India, it is to be hoped that ſtrict inquiry will be made after it.

Letiferam citra ſaniem: tunc irrita peſtis
Exprimitur, fauceſque fluunt pereunte veneno.
Lib. iv. 724.

Thus oft th' Ichneumon, on the banks of Nile,
Invades the deadly Aſpic, by a wile;
While artfully his ſlender tail is play'd,
The ſerpent darts upon the dancing ſhade:
Then turning on the foe with ſwift ſurpriſe,
Full on his throat the nimble creature flies:
The gaſping ſnake expires beneath the wound,
And ſheds his baneful poiſon on the ground.
ROWE.

XXI.—*The Four-toed Weaſel.*

THIS is the *Surikate* of *Buffon*, a weaſel with a very ſharp-pointed noſe, depreſſed head, inflated cheeks, and a long upper jaw: it has black whiſkers, ariſing from warty tubera: its irides are duſky; the ſpace about its eyes is black: its ears are ſmall, rounded, and black, and lie cloſe to the head: its tongue is oblong, blunt, and rough: it has ſix ſmall cutting teeth, two long canine teeth in each jaw, and five grinders on each ſide: its back is very broad, and a little convex: its belly is broad and flat; its legs are ſhort; its feet ſmall, and naked at the bottom, with four toes on each. This and the hyæna are the only quadrupeds which have four toes on all their feet. The claws on the fore feet are long, like thoſe of the badger; thoſe on the hind feet are ſhort.

Its hair is brown near the bottom, black near the ends, and hoary at the points; that on the back is undulated or wavy; the inſide of its legs a yellowiſh brown; its tail

tail is tufted with black. It is eleven inches long: its tail, which is thick at the baſe, ending pretty abrupt, meaſures eight inches.

It inhabits the *Cape of Good Hope*, where it is called *Meer-rat*. It feeds on fleſh, preys on mice, and is a great enemy to *blattae*. Like the ſquirrel, it employs its fore paws to convey its victuals to its mouth, and laps water like a dog: it is much in motion, and always makes a grunting noiſe. It utters two kinds of ſounds: when uneaſy or diſturbed, it barks like a young dog; when pleaſed, it emits a ſound like that of a ſmall rattle in rapid motion. It may be tamed; but it bites thoſe whoſe ſmell it finds diſagreeable. It ſits quite erect, dropping its fore legs on its breaſt, and moving its head with great eaſe, as if on a pivot, and appearing as if it liſtened, or had juſt ſpied ſomething new. When pleaſed, it makes a rattling noiſe with its tail; for which reaſon the *Dutch*, at the *Cape*, call it *Klapper-maus*. It is alſo found in *Java*, where the *Javaneſe* ſtile it *Jupe*; the *Dutch Suracatje*.

XXII.—*The Yellow Weaſel.*

THIS ſpecies has a ſhort duſky noſe, and ſmall eyes: its ears are ſhort, broad, and flapping, and placed at a great diſtance from each other: its head is flat and broad, and its cheeks ſwell out: its tongue is very long: its legs and thighs are ſhort, and very thick. It has five toes on each foot, ſeparated, and ſtanding all forward: its claws are large, a little hooked, and of a fleſh-colour: its hair is ſhort, cloſe, ſoft, and gloſſy: on the head, back, and ſides, it conſiſts of a mixture of yellow and black: its cheeks, belly, and the inſide of its legs, are yellow. Half

way

way down the middle of its belly there is a duſky liſt, ending at the tail; and another along the middle of the back to the tail: the tail itſelf is of a bright tawny, mixed with black: it is round, and has the ſame prehenſile faculty with that of the ſapajous. The body meaſures nineteen inches, the tail ſeventeen.

There was one ſhewn ſome years ago in *London*. Its keeper ſaid it came from the mountains of *Jamaica*, and called it a *Potto*, the name given by ſome writers to a ſpecies of *ſloth* found in *Guinea*.

It was very good natured and ſportive, and would catch hold of any thing, and ſuſpend itſelf by its tail. It lay with its head under its legs and belly.

XXIII.—*The Mexican Weaſel.*

THE *Mexican* weaſel has a ſhort duſky noſe, a tongue of vaſt length, and ſmall eyes, encircled with a duſky colour: its ears are ſhort, rounded, and placed very diſtant from each other: its hair is ſhort. On the head, the upper part of the body, and the tail, the colours are yellow, grey, and black intermixed: the throat and inſides of the legs of a lively yellow; the belly is of a dirty white, tinged with yellow: its toes are ſeparated; the claws crooked, white, and guttered beneath.

This animal is about two feet four inches long; its tail near one foot three. The tail is taper, covered with hair, except beneath, near the end, where it is naked, and of a fine fleſh-colour. It is extremely like the former, but larger in all its parts. Like the former, it has a prehenſile tail, and is naturally very good natured. It goes to ſleep at the approach of day, wakes towards night, and becomes very lively. It makes uſe of its feet o catch any thing, and has many of the actions of a

monkey. It eats like a ſquirrel, holding its food in its hands. It has a variety of cries during the night: one like the low barking of a dog; its plaintive note is cooing like a dove; its menacing, hiſſing like a gooſe or a ſerpent; its angry cry is confuſed. It is very fond of ſugar, and all ſweet things: it eats fruits and vegetables of all kinds: it will fly at poultry, catch them under the wing, ſuck the blood, and leave them without tearing them. It prefers a duck to a pullet; yet hates the water.

XXIV.—*The Brazilian Weaſel**.

THE *Brazilian* weaſel has the upper jaw lengthened into a pliant, moveable proboſcis: it is much longer than the lower jaw. Its ears are round, its eyes ſmall, its noſe duſky: its hair is of a bright bay colour, and is ſmooth, ſoft, and gloſſy. Its tail is annulated with duſky and bay. It has a whitiſh breaſt. Its body meaſures eighteen inches, its tail thirteen.

The duſky *Brazilian* weaſel is a variety of the former. Its noſe and ears are formed like thoſe of the preceding; but beneath each eye it has two ſpots of white: the hair on its back and ſides is duſky at the roots, black in the middle, and tipt with yellow. Its chin and throat, the ſides of its cheeks, and its belly, are yellowiſh: its feet are black, and its tail is annulated with black and white. Sometimes the tail is of an uniform duſky colour. *Linnæus* has deſcribed the variety with the tail of a uniform duſky colour, as a diſtinct ſpecies.

Theſe

* Viverra Naſua of the Syſt. Nat. The Coati or Brazilian Weaſel of the Tranſlator of Buffon.

Theſe inhabit *Brazil* and *Guiana*; they feed on fruits, eggs, and poultry: they run up trees very nimbly: they eat like a dog, holding their food between their fore legs: they are eaſily tamed, are very good natured, and ſeem much inclined to ſleep during the day. They make a ſort of a whiſtling noiſe. *Margrave* obſerves that they are very apt to gnaw their own tails.

XXV.—*The Stifling Weaſel* *.

This weaſel has a ſhort ſlender noſe, ſhort ears and legs, and a long tail, of a black and white colour: its body is black, well covered with hair: its length from noſe to tail is about eighteen inches.

It inhabits *Mexico*, and perhaps ſome other parts of *America*. This and the four following ſpecies are remarkable for the peſtiferous, ſuffocating, and moſt fetid vapour they emit from behind, when attacked, purſued, or frightened. This is their only means of defence. Some turn their tail to their enemies, and keep them at a diſtance by a frequent crepitus; others ſend forth their urine, tainted with its horrid effluvia, to the diſtance of eighteen feet: the purſuers are ſtopped by the terrible ſtench. Should any of this liquid fall into the eyes, it almoſt occaſions blindneſs; if on the clothes, the ſmell will remain for ſeveral days, in ſpite of all waſhing:—in order to be ſweetened, they muſt even be buried in freſh ſoil. Dogs that are not true bred to the chace, run back as ſoon as they perceive the ſmell: thoſe who have been uſed to it, will kill the animal, but are often obliged to relieve themſelves, by thruſting their noſes into the

* The Meles Surinamenſis of Briſſonius.

ground. There is no bearing the company of a dog that has killed one, for ſeveral days.

Profeſſor *Kalm* was one night in great danger of being ſuffocated by one of them that was purſued into a houſe where he ſlept. When driven into a houſe where cattle are kept, they bellow through pain:—Indeed they are much diſturbed at the ſight or ſmell of any weaſel, in their ſtalls. One of theſe that was killed in a cellar by a maid-ſervant, ſo affected her with its ſtench, that ſhe lay ill for ſeveral days; and all the proviſions that were in the place were ſo tainted, that the owner was obliged to throw them away.

Notwithſtanding this, the fleſh is reckoned good meat, and not unlike that of a pig; but it muſt be ſkinned as ſoon as killed, and the bladder taken carefully out. The *Virginian* ſpecies, or *ſkunk*, is capable of being tamed, and will follow its maſter like a dog, and never emits its vapour except it be terrified.

It breeds in hollow trees, or holes under ground, or in the clefts of rocks. It climbs trees with great agility, kills poultry, eats eggs, and deſtroys birds.

XXVI.—*The Striated* or *Striped Weaſel**.

This ſtriped ſpecies of the weaſel is about the ſize of an *European* pole-cat, but his back is more arched: its ears are rounded; its head, neck, belly, legs, and tail, are black: its back and ſides are marked with five parallel white lines: there is one on the top of the back, and two on

* The Pole-cat or Skunk of Lawſon, and of Cateſby, Carolina; the Viverra Putorius of the Syſt. Nat.; the Conepate of Buffon.

on each ſide; the ſecond extends ſome way up the tail, which is long and buſhy towards the end: but it varies in the diſpoſition of its ſtripes. It inhabits *North America*. When attacked, it briſtles up its hair, and flings its body into a round form: its vapour, like that of the laſt, is horrid. *Du Pratz* ſays, that the male is of a ſhining black.

XXVII.—*The Skunk.*

THIS ſpecies of the weaſel, like the reſt, has ſhort rounded ears: its cheeks are black: it has a white ſtripe from the noſe, between the ears, to the back: the upper part of the neck, and the whole back, is white, but divided at the bottom by a black line, commencing at the tail, and paſſing a little way up the back: its belly and legs are black; its tail is buſhy, being covered thick with long coarſe hair: it is generally black, ſometimes tipt with white: the nails on all the feet are very long, like thoſe on the fore feet of the badger: it is rather leſs than the former ſpecies.

It inhabits *Peru* and *North America*, as far as *Canada*, and is of the ſame manners, and equally a ſtinkard as the others. *Charlevoix* calls it *L'Enfant du Diable*, and *Bete Puante*, *Devil's Child*, and *Stinking Beaſt*.

XXVIII.—*The Zorilla.*

THIS is the *Annas* of the *Indians*, the *Zorrinas* of the *Spaniards*. Its back and ſides are marked with ſhort ſtripes of black and white; but the latter is tinged with yellow:

yellow: its tail is long and bushy, part white, part black: its legs and belly are black. In size, it is less than the preceding. It inhabits *Peru*, and other parts of *South America*. Its pestilential vapour overcomes even the *American* panther, and stupifies that formidable enemy.

XXIX.—*The Ratel.*

This creature has a blunt nose. It has no external ears; in their place, it has only a small rim round the orifice of the auditory passage. Its tongue is rough; its legs are short, and its claws very long and straight, like those of the badger, and guttered beneath: the colour of its crown, and of the whole upper part of its body, is grey; the rest black, but that from each ear to the tail, there runs along the sides a dusky line, leaving another of grey beneath it.

The length of its body is forty inches, of the tail twelve: its fore claws measure an inch and three quarters, the hind ones one inch.

It inhabits the *Cape of Good Hope*. It lives on honey, and is a great enemy to the bees, which, in that country, usually inhabit the deserted burrows of the *Ethiopian* boar, the porcupine, jackal, and other animals that lodge under ground. It preys in the evening: it ascends the highest part of the desert to look about, and will then put one foot before its eyes, to prevent the dazzling of the sun. The reason of its going to an eminence is, for the sake of seeing or hearing the *honey-guide cuckoo* †, which

† A new species, very fond of honey, which by its noise directs men, as well as this beast, to the bees nest. Sparrman, Phil. Trans. lvii. 43.

which lives on bees, and, as it were, conducts it to their haunts. The *Hottentots* follow the ſame guide. This animal cannot climb; but when he finds the bees lodged in trees, through rage at the diſappointment, he will bite the bark from their bottoms. By this ſign alſo, the *Hottentots* know that there is a neſt of bees above.

The hair is ſo ſtiff, and the hide ſo tough, probably formed ſo by nature as a defence againſt the ſting of bees, that this animal is not eaſily killed. By biting and ſcratching, it makes a ſtout reſiſtance; and the dogs cannot faſten on its ſkin. A pack, which could tear a middle-ſized lion to pieces, can make no impreſſion on the hide of this beaſt. By worrying, they will leave it for dead, yet without having inflicted on it any wound. The *Hottentots* give it the name of *Ratel*.

XXX.—*The Quoll.*

To ſome animal of this ſpecies muſt be referred, in all probability, the quoll of *New Holland*, which is deſcribed as reſembling a pole-cat, with a brown back, ſpotted with white, and the belly of a pure white; in which it differs from the others of theſe fetid animals. It was ſeen by Captain *Cook* in *New Holland*; the natives call it *Quoll*. The late ſettlements may in time be the means of throwing more light on its hiſtory.

XXXI.—*The Blotched Weaſel.*

THE blotched weaſel takes its name from the irregular ſpots of deep brown ſcattered on its ſides, legs, and thighs, which are of a yellowiſh white: it has a round head, a ſhort noſe, pointed ears, and white whiſkers: its noſe and cheeks are of a yellowiſh white, with a round black ſpot on each ſide of the noſe, and a duſky line down the middle of the forehead: Its back, and the outſide of its limbs, are of a reddiſh brown: its tail is of the ſame colour, as long as the body, and marked ſpirally near the end with black.

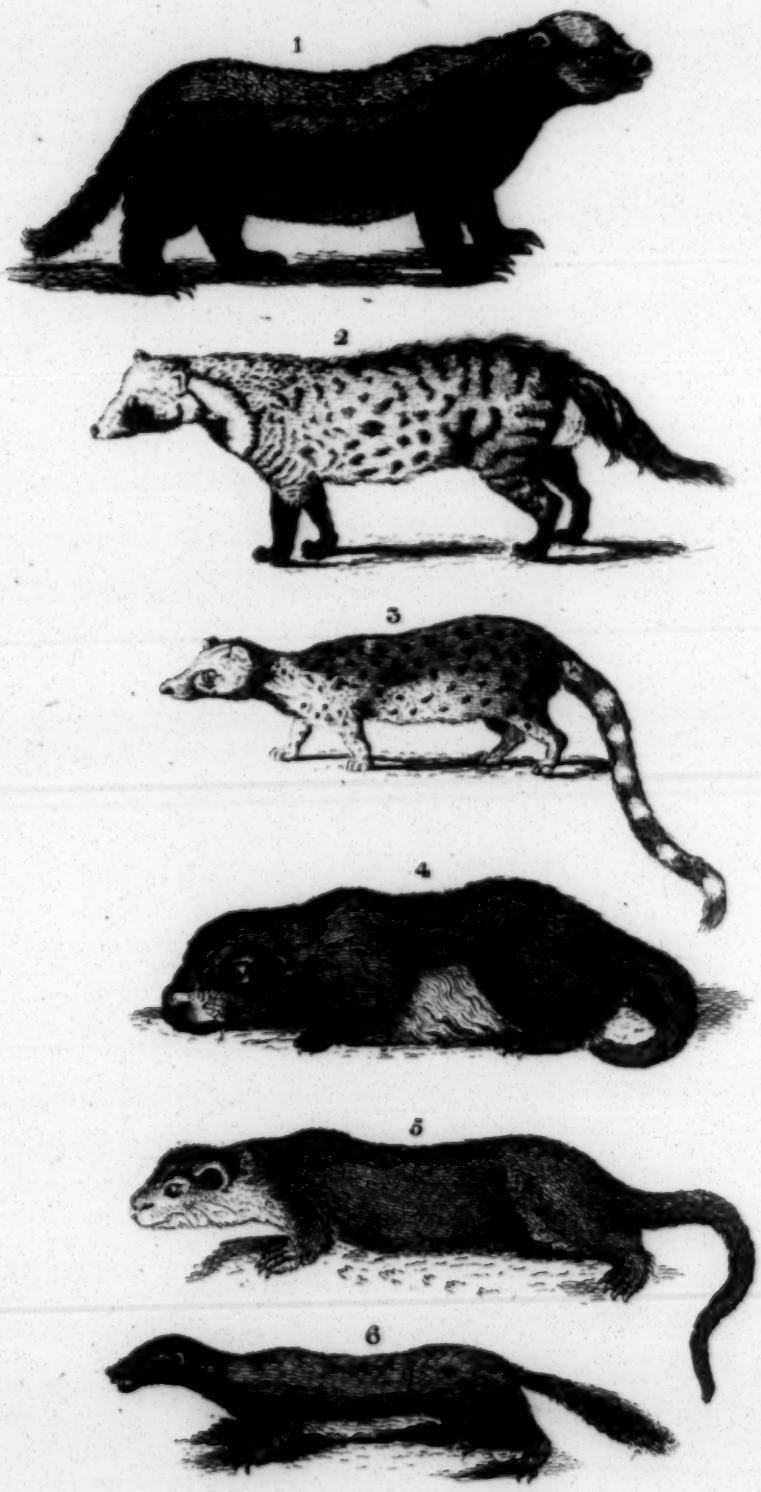
XXXII.—*The Civet Weaſel* or *Civet-Cat.*

THIS ſpecies, though it has been called by that name, has no reſemblance to a cat, but agility. It has ſhort rounded ears, ſky blue eyes, and a ſharp noſe, tipped with black: The ſides of the face, the chin, breaſt, legs, and feet, are alſo black: The reſt of the face, and part of the ſides of the neck, are white, tinged with yellow. From each ear there are three black ſtripes, ending at the throat and ſhoulders. The back and ſides are aſh-coloured, tinged with yellow, and marked with large duſky ſpots, diſpoſed in rows. The hair is coarſe; that on the top of the body ſtands up like a mane. The tail is ſometimes wholly black, ſometimes ſpotted near the baſe: Its length is about two feet three inches, the length of its tail fourteen inches. Its body is pretty thick.

It inhabits *India*, the *Philippine* iſles, *Guinea*, *Ethiopia*, and *Madagaſcar*. The famous drug, called *muſk* or *civet*,

is

Plate XXXVI.



1.VERRA RATEL 2.CIVET 3.GENET 4.OTTER
5.CANADIAN OTTER 6.LESSER OTTER

is produced from an aperture between its privities and its anus, in both ſexes, ſecreted by certain glands. The perſons who keep them, procure the muſk by ſcraping the inſide of this bag twice a-week with an iron *ſpatula*, and get about a dram each time; but it is ſeldom ſold pure, being generally mixed with ſuet or oil, to make it more weighty. The males yield the moſt, eſpecially when they are previouſly irritated. They are fed, when young, with pap made of millet, and with a little fleſh or fiſh; when old, with raw fleſh. In a wild ſtate, they prey on fowls, &c.

There is a variety of the preceding ſpecies, having ſhort rounded ears, a ſharp long noſe, and a pale aſh-coloured face: its head, and the lower part of its neck, are mixed with dirty white, brown, and black: the ſides of its neck are marked with ſtripes of black, beginning near the ears, and ending at the breaſt and ſhoulders. From the middle of the neck, along the ridge of the back, there is extended a black line, reaching ſome way up the tail; on each ſide of this there are two others. The ſides are ſpotted with aſh-colour and black: the tail is barred with black and white: the black bars are broader on the upper ſide than the lower. This variety was firſt diſtinguiſhed from the other by *Buffon*, though it had been figured long before by *Hernandez* and *Geſner*. It was unknown in *Mexico*, till introduced there from the *Philippine* iſles. Theſe animals ſeem not to have been known to the ancients. It is probable the drug was brought to *Europe* without their knowing its origin; for it is certain the fine gentlemen at *Rome* uſed perfumes, either this kind, or ſome other. *Paſtillos Rufillus olet.*

XXXII.—*The Genet* *.

THE ears of the genet are a little pointed; the body is ſlender, and the tail very long: the colour of the body is a pale tawny, ſpotted with black; and the ridge of the back is marked with a black line: the tail is annulated with black and tawny, and the feet are black: ſometimes the ground-colour of the hair inclines to grey. It is about the ſize of a martin; but the fur is ſhorter.

It inhabits *Turkey*, *Syria*, and *Spain*. It frequents the banks of rivers and rivulets, and other moiſt places: *Buffon* ſays there are ſome found in the ſouthern provinces of *France*.

They ſmell faintly of muſk, and, like the civet, have an orifice beneath the tail. They are kept tame in the houſes at *Conſtantinople*, and are uſeful as cats, for the purpoſe of catching mice.

XXXIV.—*The Foſſane.*

THE Foſſane weaſel has a ſlender body, rounded ears, and black eyes: its back and legs are covered with cinereous hair, mixed with tawny: the ſides of its face are black. From the hind part of the head, four black lines are extended towards the back and ſhoulders: the tail is ſemi-annulated with black: the whole under ſide of the body is of a dirty white.

It inhabits *Madagaſcar* and *Guinea*, *Cochin-China*, and the *Philippine* iſles. It is a fierce creature, and hard to be

* The Viverra Genetta of the Syſt. Nat. La Genette of Buffon.

be tamed. In *Guinea* it is called *Berbe*, and by the *Europeans*, *Wine-bibber*, as it is very greedy of *palm-wine*. Like the reſt of its genus, it is deſtructive to poultry. When young, it is reckoned good to eat.

There is a ſpecimen of this ſpecies in the *Leverian* muſeum, which Mr. *Pennant* deſcribes thus:

It is a weaſel with a white ſpot on each ſide of its noſe, and another beneath each eye: the reſt of the noſe, cheeks, and throat, are black: its ears are very large, upright, rounded, thin, naked, and black: its forehead, ſides, thighs, rump, and upper part of the legs, cinereous. On the back there are many long black hairs: on the ſhoulders, ſides, and rump, there are diſperſed ſome black ſpots: its tail is black towards the end; near the baſe, it is mixed with tawny, and ſlightly annulated with black: its feet are black, with white claws. It is of the ſize of the genet, to which it bears a great reſemblance: its tail is of the ſame length with the body.

Genus XXIV.—*The Otter.*

The otter has ſix cutting teeth, and two canine in each jaw, and five toes on each foot; each toe connected by a ſtrong membrane. *Buffon* will not allow us to call him an amphibious animal, though he depends almoſt ſolely on the waters for his food, and lives much in them, ſince he cannot continue long under water without reſpiration. This genus, which appears in ſome degree allied to the *Beaver*, contains only five ſpecies.

I.—*The Greater Otter* *.

Besides the generic diſtinctions with regard to teeth and toes already mentioned, this ſpecies has the following marks: ſhort ears, eyes placed near the noſe, thick lips, and large whiſkers. The colour of his whole body is a deep brown, except two ſmall ſpots on each ſide of the noſe, and another beneath the chin: the throat and breaſt are aſh-coloured: his legs are ſhort and thick, looſely joined to the body; capable of being brought on a line with the body, and of performing the part of fins: each toe is connected to the other by a broad ſtrong web.

His uſual length is twenty-three inches; his tail meaſures ſixteen: the weight of the male, from eighteen to twenty-ſix pounds; of the female, from thirteen to twenty-two.

It

* The Muſtela Lutra of the Syſt. Nat. In French, Le Loutre, or La Loutre.

It inhabits all parts of *Europe*, the north and north-eaſt of *Aſia*, as far as *Kamſchatka*, and in the eaſternmoſt of the *Fox* iſlands. It abounds in *North America*, particularly in *Canada*, where the moſt valuable furs of this kind are produced. It dwells on the banks of rivers, and burrows, forming the entrance of its hole beneath the water, whence it works upward, making a ſmall orifice or air-hole in the midſt of ſome buſh. It is a cleanly animal, and depoſites its excrements only in one place. It ſwims and dives with great eaſe. It is very deſtructive to fiſh; but when they fail, it makes excurſions on land, and preys on lambs and poultry. It is ſaid to hunt its prey againſt the ſtream, that it may return with greater eaſe with its booty. It frequents not only freſh waters, but alſo ſometimes ventures out to ſea, though it never goes far from the ſhore, in queſt of prey. It frequently gives a ſort of loud whiſtle, by way of ſignal to another. It is a fierce animal, and its bite dangerous; yet it is capable of being tamed, and made to follow its maſter like a dog, and even to fiſh for him, and to return with its prey. They ſometimes breed in ſinks and drains. They dread neither cold nor moiſture. The female comes in ſeaſon in winter, and brings forth in the month of *March*, four or five young ones at a time. Contrary to what happens to moſt other animals, the young otter is not ſo handſome as the old.

Mr. *Pennant* thinks, that poſſibly the *Latax* of *Ariſtotle* was a large variety of the otter.

II.—*The Brazilian Otter.*

THE *Brazilian* otter has a round head like that of a cat: it has feline teeth too; eyes ſmall, round, and black; large whiſkers, and round ears; feet like thoſe of a monkey, with five toes, the inner ones the ſhorteſt, all armed with ſharp claws: its tail, which is flat and naked, reaches no lower than the feet: its hair is ſoft, and not long: it is entirely black, except the head, which is duſky, and the throat, which is yellow. It is about the bulk of a middling dog. It inhabits *Brazil*, *Guiana*, and the borders of the *Oronoko*. It lives on fiſh, and cruſtaceous animals, ſuch as cray-fiſh, and is very dextrous in robbing nets and weels of what it finds in them. It makes a noiſe like a young puppy. Its fleſh is reckoned delicate eating, and does not taſte fiſhy, notwithſtanding its food. They are extremely cleanly, live in ſociety, and go in troops; they are fierce, and make a vigorous defence againſt dogs; but when taken young, are ſoon tamed.

III.—*The Leſſer Otter* †.

THIS ſpecies is of the form of the greater otter; but is only one third of its ſize. *Linnæus* and ſome other writers have claſſed it with the weaſel tribe, as a ſort of amphibious pole-cat: it has roundiſh ears, a white chin, and a tawny and duſky body; the ſhort hairs being yellowiſh, and the long ones black. Its feet are broad, webbed,

† The Muſtela Lutreola of the Syſt. Nat.

bed, and covered with hair; its tail is duſky, and ends in a point. It inhabits *Poland* and the north of *Europe*; but none of them are found beyond the lake *Baikal*, or in the north-eaſt parts of *Siberia*. It lives on fiſh, frogs, and water-inſects. Its fur is very valuable. It is next in beauty to that of the ſable. It is caught with dogs, and in traps; but, like the pole-cat, it is moſt exceſſively fetid. It is the ſame animal with the *Minx* of *North America*. The ſkins are often brought over to *England*.

IV.—*The Saricovienne* or *Cayenne Otter*.

This ſpecies is alſo web-footed, of the ſize of a cat, with a fur fine as velvet, grey and black: it lives more in the water than on land: its fleſh is very delicate and fine eating.

V.—*The Sea Otter* ‡.

The ſea otter has a black noſe: his upper jaw is both longer and broader than the under: he has long white whiſkers, hazle irides, ſmall, erect, conic ears; ſix cutting teeth in the upper jaw; in the lower four: his grinders are broad, for breaking and comminuting ſhell-fiſh: his ſkin is thick; his hair is thick and long, exceſſively black and gloſſy; beneath it there is a ſoft down: his colour ſometimes varies to ſilvery: his legs are thick and ſhort: his toes are covered with hair, and joined by a web: his hind feet are exactly like thoſe of a ſeal, and have

‡ Muſtela Lutris of the Syſt. Nat.

have a membrane ſkirting the outſide of the exterior toe, like that of a gooſe. The length of his body is about three feet; of his tail, thirteen inches and a half: the tail is flat, fulleſt of hair in the middle, and ſharp-pointed. The biggeſt of theſe animals weigh ſeventy or eighty pounds. They are found in great abundance in *Bering's* iſland, and the *Fox* iſlands: they are moſt harmleſs and inoffenſive creatures, moſt affectionate to their young: they will pine to death for the loſs of them, and die on the very ſpot where they have been taken from them. Before the young can ſwim, they carry them in their paws, lying in the water on their backs. They are ſwift in running, and very ſportive: They embrace, and even kiſs each other. They ſwim often on their backs, on their ſides, and even in a perpendicular poſture. They inhabit ſuch ſhallows as abound with ſea-weeds, and feed on lobſters, fiſh, *ſepiæ*, and ſhell-fiſh. They breed only once a-year, bring but one at a time, and ſuckle it for a year. They are dull ſighted, but of a very quick ſcent. They are hunted for their ſkins, which are of great value; they are ſold to the Chineſe for ſeventy or a hundred rubles a piece. Each ſkin weighs three pounds and a half. The young are reckoned ſuch delicate meat, that their fleſh is ſcarcely to be diſtinguiſhed from that of a ſucking lamb.

Div. II. Sect. III.

Digitated Quadrupeds without canine Teeth, having two cutting Teeth in each Jaw.

These are generally herbivorous or frugivorous.

Genus XXV.—*The Cavy.*

The characteriſtics of this genus are, two cutting teeth in each jaw; generally four toes on the fore, and three on the hind feet; ſhort ears; no tail, or a very ſhort one; their pace is ſlow and creeping; they are numerous breeders, but ſhort lived. Mr. *Pennant* reckons ten ſpecies of this genus.

I.—*The Capibara Cavy* *.

The capibara has a very large and thick head and noſe, ſmall rounded ears, and large black eyes. Its upper jaw is longer than the lower. It has two ſtrong and great cutting teeth, and eight grinders in each jaw. Each of theſe grinders forms, on its ſurface, ſeemingly three teeth, each flat at their ends. Its legs are ſhort; its toes are long; theſe are connected, near their bottoms,

* Sus Hydrochæus of the Syſt. Nat. The Cabiai or thick noſed Tapir of the Tranſlator of Buffon.

by a ſmall web, and guarded at their ends by a ſmall hoof. It has no tail. The hair on the body is ſhort, rough and brown. On its noſe it has long and hard whiſkers. It grows to the ſize of a hog of two years old. It inhabits the country from the Iſthmus of *Darien* to the *Brazils*, and even to *Paraguay*, and lives in fenny parts, not remote from the banks of great rivers, ſuch as the *Oronoko*, *Amazon*, and the *Rio de la Plato*. It runs ſlowly; but ſwims and dives remarkably well, and keeps under water ſo long, that the hunters frequently give up for loſt thoſe they have been in chace of. It feeds on fruits, and vegetables too; but is very dextrous in catching fiſh, which it brings on ſhore, and eats at its eaſe. It ſits up, and holds its prey with its fore-feet, feeding like an ape. They keep always in pairs, a male and a female, or elſe in great herds, feed in the night, and commit great ravages in gardens. They make a horrible noiſe, like the braying of an aſs. They are of a gentle and peaceable diſpoſition, eaſily made tame, and grow very familiar. Their fleſh is eaten; it is tender, but has an oily and fiſhy taſte, in its wild ſtate, in conſequence of its food. *Buffon* thinks they might be propagated in Europe.

II.—*The Reſtleſs Cavy, or Guinea Pig* *.

THIS ſpecies, beſides the generic characters already enumerated, has its upper lip half divided. Its ears are very large, broad, and rounded at the ſides: its hair is erect, not unlike that of a young pig: its colour is white, or white varied

* Mus Porcellus of the Syſt. Nat.

varied with orange and black, in irregular blotches. It has no tail: it has four toes on the fore-feet, and three on the hind. It inhabits *Brazil*. Writers make no mention of its manners in a wild ſtate; but it is domeſticated and well known in *Europe*, as a reſtleſs grunting little animal, perpetually running from corner to corner. It feeds on bread, grain, and vegetables; breeds when two months old; has young every two months, and brings from four to twelve at a time. A ſingle pair might be multiplied, ſo as to produce a thouſand within a year. They are ſo prolific, that they would be abſolutely innumerable, were not vaſt numbers of their young eaten by cats, killed by the males, or deſtroyed by other means: they are very tender: multitudes of both young and old periſh with cold or moiſture: they never drink, though they very frequently urine. Their temperament is very hot. When under the influence of love, they are ſuſceptible of anger, fight cruelly, and even kill each other in diſputing the poſſeſſion of a female. They paſs their lives in ſleeping, eating, and amours. A kind of chirping noiſe marks the time of theſe: they raiſe a ſharp cry when they feel pain. Their ſleep is ſhort, but frequent: they eat precipitantly, like the rabbit, little at a time, but often, every hour indeed, both day and night; and indulge in mutual embraces as often as they eat. They feed on all kinds of herbs, but eſpecially parſley, which they prefer to grain or to bread: they are likewiſe fond of apples, and other fruits. Their ſkins are hardly of any value, and their fleſh, though eatable, is not ſo good as to be much demanded; but it might perhaps be improved, by keeping them in warrens, where they could have the benefit of freſh air, and the liberty of chooſing herbs agreeable to their taſte.

Thoſe kept in houſes have nearly the ſame taſte with warren rabbits. Thoſe kept in gardens, during ſummer, have an inſipid, but leſs diſagreeable ſavour. *Buffon* concludes their character and hiſtory thus: "By nature "they are gentle and tame: they do no miſchief, but "they are equally incapable of good; for they never "form any attachments: mild by conſtitution, docile "through weakneſs, almoſt inſenſible to every object; "they have the appearance of living machines conſtruct-"ed for the purpoſes of propagation, and of repreſenting "a ſpecies."

III.—*The Rock Cavy* or *Apereа.*

THIS ſpecies has alſo its upper lip divided; ſhort ears, four toes on the fore-feet, and three on the hind. It has no tail. The colour of the upper part of its body is black, mottled with tawny; but its throat and belly are white. It is one foot in length, and inhabits *Brazil*, living in the holes of rocks, whence it is driven out, and taken by little dogs. For the table it is preferable to our beſt rabbits: its motions are like thoſe of the hare. Some of them reſemble the hare in colour too; but the head is longer, and the ears are not above an inch in length: the fore-legs exceed not three inches; thoſe behind are a little longer.

IV.—*The Patagonian Cavy.*

THE ears of the *Patagonian* cavy are long and much dilated near the bottom. Its upper lip is divided. On each ſide of it noſe, there are tufts of ſoft hair, and long whiſkers. The tip of its noſe is black: its face, its back, and the fore part of its legs, are cinereous and ruſt coloured: its breaſt and ſides are tawny; its belly is of a dirty white. On each thigh it has a white patch. Its rump is black; its legs are very long; its claws are long, ſtraight and black: it has four on the fore-feet, three on the hind. Its tail is a mere naked ſtump. Some of theſe creatures weigh ſix and twenty pounds. They are found in plenty about *Port Deſire* in *Patagonia*. They live in holes of the earth like the rabbit. Their fleſh is of a ſnowy whiteneſs, and of an excellent flavour. Sir *John Narborough*, and other voyagers, call it a hare.

V.—*The Spotted Cavy or Paca* *.

THIS ſpecies of the cavy has the upper jaw longer than the lower; large noſtrils, long whiſkers, ſhort and naked ears, and a thick neck. Its hair is ſhort and hard; on the upper part of the body, a dark brown. Its ſides, on the lower part, are marked lengthways with lines of grey ſpots. Its belly is white. In ſome, perhaps young ones, the ſides and ſpots are of a pale yellow. It has five toes on each foot; and only the mere rudiment

* Mus aca of the Syſt. Nat.

rudiment of a tale. Its make and voice reſemble thoſe of a pig. In ſome places, it is called the *hog-rabbit*. It inhabits *Brazil* and *Guiana*, and lives in fenny places. It burrows under ground, grows very fat, and is eſteemed a great delicacy in *Brazil*; even its ſkin is eat, like that of a pig. Its eats its meat on the ground, not ſitting up as ſome others of this genus do.

They are diſcovered by little dogs, who point out the places they lie in. The maſter digs over them; and when he comes near, transfixes them with a knife; otherwiſe they are apt to eſcape. When they have opportunity, they will bite dreadfully. There is a variety of them quite white, found on the banks of the river *St. Francis*.

Mr. *Pennant* ſays, that in ſize this ſpecies meaſures only ten inches; but *Buffon* ſays they are larger than any rabbit. Speaking of one that was kept in *France*, "Though "our animal, ſays he, had not acquired his full growth, "he was eighteen inches long in his natural contracted "ſituation; but when he extended himſelf, he was near "two feet. His head, from the noſe to the top of the "front, was five inches: his eyes were about two inches "diſtant. When upon his legs, his height before was "ſeven inches, behind about nine inches and a half. The "poſterior part of the body meaſured nineteen inches and "a half in circumference, the fore part only fourteen. "Five longitudinal rows of white ſpots ran along the ſides, "and approached each other at the extremities. His tail "was hardly viſible. Upon ſearch, we found a ſmall but-"ton of two or three inches long." The count gives a pretty full account of the manner of living and acting of the above animal, which he kept in his houſe from the month of Auguſt 1774, to the 28th of May 1775; during all which

which period its ſize continued to augment. Provided with a wooden cage or box, it remained perfectly tranquil during the day, eſpecially when plentifully ſupplied with food. After feeding, he retired, of his own accord, to his box; but when night approached, he diſcovered a violent inclination to get out. He was remarkably cleanly; and when about to void his excrements, he always retired to the moſt private corner he could find. All obſcure corners ſeemed agreeable to him. He would make himſelf a new neſt in the bottom of an open preſs, or under the kitchen grate; and nothing but force would make him leave his new abode. He was fond of adulation, and licked the hand of the perſon that carreſſed him. When gently ſtroaked on the back, he ſtretched himſelf out, and lay down on his belly. His ſkin was ſo ſenſible, that the ſlighteſt touch was ſufficient to excite the moſt lively emotions. This great ſenſibility produced ſometimes the moſt violent paroxiſms of paſſion. The bare ſight of an unknown dog was ſufficient; he would dart ſuddenly on the dog, however innocent, and bite him ſeverely. He was apt to treat people with whom he was not acquainted, in the ſame manner, if they tried to irritate him. He had an averſion to children, and purſued them. He expreſſed his paſſion by chattering his teeth. He often ſat on his poſteriors, and ſeemed to comb his head and whiſkers with his paws, which he licked, and moiſtened with his ſaliva. In this operation, he often uſed both paws at a time, and would afterwards ſcratch all his body. He would eat bread equally well, whether it had been ſoaked in water, wine or vinegar. When ſugar or fruits were offered him, he expreſſed his joy by bounding and leaping. He eat, with equal reliſh, grapes, celery, onions and garlic: he did

did not refuſe graſs, moſs, or the bark of trees. He would eat wood even half charred. He ſeemed to like fleſh the leaſt of any kind of food. He lapped like a dog. Mr. *Buffon* thinks he might be naturalized in *France*; and imagines, the introducing him would be a valuable acquiſition, as a ſingle individual of this ſpecies would furniſh as much good meat as ſeven or eight rabbits.

M. de la Borde ſays, that there are two or three ſpecies of the cavy at *Cayenne*, which are ſaid not to intermix. Some of them weigh from fourteen to twenty pounds, and others from twenty-five to thirty.

VI.—*The Long-noſed Cavy* *.

THIS ſpecies derives the name here given it, from the length of its noſe. Its upper lip is divided. It has ſhort rounded ears, and black eyes. Its hair is hard and ſhining on the body, mixed with red, brown and black. Its rump is of a bright orange colour; its belly is yellow. Its legs are almoſt naked, ſlender and black. It has four toes on the fore-feet, three on the hind, a ſhort naked tail, and is of the ſize of a rabbit. It inhabits *Brazil*, *Guinea*, &c. It grunts like a pig, and is very voracious. It ſits on its hind legs, and holds its food with its fore-paws when it eats, and hides what it cannot conſume. It hops likes a hare, and goes very faſt. When purſued, it takes ſhelter in the hollow trees. When angry, it ſets up the hair on its back, and ſtrikes the ground with its hind feet. Both its eye and its ear

* Cavia Aguti of the Syſt. Nat. The Agouti of Buffon.

ear are fine. It ſtops and liſtens to the ſound of muſic. It is capable of being tamed, and is eaten by the inhabitants of *South America*. They annually produce two or three, but generally two. They ſeem to require a warm climate, in order to ſubſiſt and multiply. They remain in their holes during the night, unleſs the moon ſhines bright; but they run about during moſt of the day.

M. de la Borde ſays it is the moſt common quadruped in *Guiana*, and multiplies as faſt as the rabbit; that they are eaſily tamed, and return to the houſe of their own accord.

VII.—*The Olive Cavy.*

THIS is a ſpecies of the cavy of an olive colour, leſs than the former, and more delicate eating. It inhabits *Guiana*, and the iſlands of *St. Luca* and *Grenada*. It lives on fruits in the woods, but is eaſily made tame. It makes a cry, but very rarely, like the reſtleſs cavy. It abhors water.

VIII.—*The Javan Cavy* *.

THE *Javan* cavy has a ſlender ſmall head, prominent naked ears, rounded at the tops. Its hair is very ſtiff like briſtles, eſpecially on the back, and reddiſh on the upper part of the body. Its breaſt and belly are white;

* Mus Leporinus of the Syſt. Nat.

its legs are long; its hind parts are large. It has four toes on the fore-feet, three on the hind: and is of the ſize of a hare. It inhabits *Surinam*, and the hotter parts of *South America*, where it is a common article of food. Its fleſh is white, but dry. It is not found in *Sumatra* as *Cateſby* aſſerts, nor in *Java*, notwithſtanding its name.

IX.—*The Cape Cavy.*

THIS ſpecies, well known at the *Cape of Good Hope*, where they are found in great abundance among the rocky mountains, like ſeveral of the others, burrows under ground, has a ſlow creeping pace, and a ſharp voice, which is often repeated. It is diſtinguiſhed by a thick head, and full cheeks, and oval ears, half hid in its fur. Its head is of the colour of a hare; the top of the back duſky, mixed with grey: its ſides and belly are of a whitiſh grey. Its toes are like thoſe of the reſt; and its tail is ſcarce viſible. It is of the ſize of a rabbit; but the ſhape of the body is thick and clumſy. Its fleſh is eſteemed very good meat.

X.—*The Muſk Cavy.*

THE upper part of the body of the muſk cavy is of a black or tan colour. Its belly is white. It is almoſt as big as a rabbit, and inhabits *Martinico* and the reſt of

of the *Antilles*. It burrows like the rabbit, and ſmells ſo ſtrong of muſk, that its retreat may be traced by the perfume. This is rather an obſcure ſpecies, and has not hitherto been accurately examined and deſcribed by any naturaliſt; ſo that it remains for thoſe who have ſkill and opportunity to elucidate its hiſtory.

Genus XXVI.—*The Hare.*

The characters of this genus are, two cutting teeth in each jaw; a ſhort tail, or none; five toes before, and four behind.

This genus, as well as the laſt, contains ten ſpecies, beſide ſeveral ſubordinate varieties. Hares, including rabbits, &c. may be divided into two claſſes, thoſe with, and thoſe without tails.

I.—*The Common Hare* *.

The hare is a well known animal. Its long ears are tipt with black; its eyes are very large and prominent; its chin is white: it has long white whiſkers. The hair or fur on its face, back and ſides, is white at the bottom, black in the middle, and tipt with tawny red. Its throat and breaſt are red; its belly white. Its tail is black above, and white beneath: its feet are covered with hair, even at the bottom. A large hare weighs eight pounds and a half. It is ſaid, that in the *Iſle* of *Man* ſome have been known to weigh twelve. Perhaps the hares in that iſland, are larger nearly in the ſame proportion as the native breed of horſes are leſs than others. The length of a common hare, from the noſe to the tail, is two feet. It inhabits

* The Lepus of Pliny; the Lepus timidus of the Syſt. Nat.; Le Lievre of Buffon; in Greek Λαγως.

Plate XXXVII.



1. CABIAI 2. GUINEY PIG 3. PACA 4. HARE
5. WILD RABBIT 6. DOMESTIC RABBIT

habits all parts of *Europe*, moſt parts of *Aſia*, *Japan*, *Ceylon*, *Egypt* and *Barbary*. It is a watchful, timid animal, always lean; and runs ſwifter up a hill than on even ground: hence, when ſtarted, it endeavours to run up hill. It frequently eſcapes the hounds by various artful doublings. It frequently keeps all day in its ſeat, and feeds by night. It returns to its form by the ſame road that it left it: it does not pair. Their rutting ſeaſon is February or March, when the male purſues the female by the ſagacity of its noſe. They breed often in the year; go with young only thirty or thirty-one days; and bring three or four at a time. They admit the male during the time of their geſtation, and have frequently ſuperfetations. The male and female are liable to be miſtaken the one for the other. The mother ſuckles her young about twenty days. Their fur is of great uſe in the manufacture of hats. They are very ſubject to fleas; yet the *Dalecarlians* make a cloth of the fur, which, it is ſaid, preſerves the wearer from their attacks.

Hares feed on vegetables, and are very fond of the bark of young trees, except that of the alder and lime, which, it is ſaid, they never touch. They are great lovers of birch, parſley and pinks. Their fleſh was a forbidden food among the ancient *Britons*: the *Romans*, on the contray, held it in great eſteem.

Inter quadrupedes gloria prima lepus,

was the opinon of *Martial*; and *Horace*, who was likewiſe a *bon vivant*, ſays, that every man of taſte muſt prefer the wing:

Fecundi leporis ſapiens ſectabitur armos. Even at preſent the fleſh of the female is preferred to that of the male;

male; and that of thoſe bred on dry hilly ground, to that of thoſe that reſide in marſhy or wet places.

The hare and the rabbit afford to man the double advantage ariſing from their number and utility. Hares ſleep much, but always with their eyes open. They have neither eye-lids nor eye-laſhes. Their eyes ſeem to be bad; but they have an acute ſenſe of hearing, and enormous ears in proportion to the ſize of their bodies. Theſe long ears they move with great facility, and employ them as a rudder to direct their courſe, which is ſo rapid, that they outſtrip all other animals. The period of their natural life is ſaid to be about ſeven years: but, it is ſaid, the males live longer than the females. They paſs their days in ſolitude and ſilence, frequently in fear and trembling; as a falling leaf is ſufficient to alarm them. Their voice is never heard, but when they are ſeized or wounded. It is a ſharp loud cry, and has ſome reſemblance to the human voice. They are eaſily tamed; but never acquire that degree of attachment which is neceſſary to make them domeſtic; they always take the firſt opportunity of regaining their liberty. They have been trained to beat a drum, to perform geſtures in cadence, &c. They want not inſtinct ſufficient for their own preſervation, nor ſagacity for eſcaping their enemies. The ſportſman has frequent opportunities of obſervation, and can recount many inſtances of their ſurpriſing ſagacity, though they have not all equal experience and cunning. They turn more or leſs white with age. They are thought to be larger and ſtronger, in proportion to the coldneſs of the climate. A perpetual enmity is carried on againſt them, not only by men and dogs, but alſo by cats, foxes, wolves, and birds

birds of prey, ſuch as owls, buzzards, vultures, and eagles; ſo that it is almoſt a miracle that any of them eſcape deſtruction.

There have been ſeveral inſtances of what may be called monſters in this ſpecies, *horned hares*, having excreſcences growing out of their heads, the likeſt of any thing to the horns of the Roebuck *. Such inſtances have occurred in *Saxony*; and Dr. *Pallas* adds another found near *Aſtracan*.

In *Cook's* voyages mention is made of ſtraw-coloured animals like dogs, which run like hares, ſeen in *New Holland*.

II.—*The Varying Hare.*

THE varying hare has a ſoft down upon it, which is grey in ſummer, with a ſlight mixture of black and tawny. Its ears are ſhorter, and its legs are more ſlender than thoſe of the common hare: its tail is entirely white, even in ſummer: its feet are moſt cloſely and warmly covered with fur. In winter, the whole animal changes to a ſnowy whiteneſs, except the tips and edges of the ears, which remain black; as do alſo the ſoles of the feet, on which, in *Siberia*, the fur is doubly thick. It is leſs than the common ſpecies. It inhabits the higheſt *Scottiſh Alps*, *Norway*, *Lapland*, *Ruſſia*, *Siberia*, *Kamſchatka*, the banks of the *Wolga*, and *Hudſon's Bay*. In *Scotland*, it keeps on the tops of the higheſt hills,

* Geſner's Hiſtory of Quadrupeds, p. 634.; Muſeum Regium Hafniæ, No. 48. tab. iv.; Klein's Hiſtory of Quad. 32. tab. iii.; Wormie's Muſeum, p. 321.; Grew's Muſeum of the Royal Society.

hills, and never deſcends into the vales, nor mixes with the common hares. It does not run faſt, but takes ſhelter in the clefts of rocks: it is eaſily tamed; is full of frolic, and fond of honey, and caraway comfits: It eats its own dung before a ſtorm: It changes its colour in September, and reſumes its grey coat in April. In the extreme cold of *Greenland* only, it is always white. Both this, and the preceding ſpecies are common in *Siberia*, and on the banks of the *Wolga*. The one never changes colour; the other, a native of the ſame place, conſtantly aſſumes the whiteneſs of the ſnow during the winter. This it does, not only in the open air and in a ſtate of liberty; but, as has been proved by experiment, even when kept tame and preſerved in apartments kept warm with ſtoves, in which it experienced the ſame changes of colour, as if it had remained on the ſnowy plains *.

They aſſemble, and are ſeen in troops of five or ſix hundred, migrating in ſpring, and returning in autumn †. Compelled by the want of ſubſiſtence, they quit in winter the lofty hills, and ſeek the plains and wooded parts, where vegetables abound. Towards ſpring, they return to their mountain quarters.

Mr. *Muller* ſays he once ſaw two black hares of a wonderful fine gloſs, and of as full a black as jet. Another of the ſame kind was taken near *Caſan* in winter 1768. Theſe ſpecimens were much larger than the common kind. In the ſouthern and weſtern parts of *Ruſſia*, there is a mixed breed of hares, between this and the common ſpecies. It ſuſtains, during winter only, a partial loſs of colour. The ſides, and more expoſed parts of the ears and legs, in that ſeaſon, become white: the other

* Pallas, I. p. 7. † Bell's Travels, I. 238.

other parts retain their colours. This variety is unknown beyond the *Urallian Chain*. It is called by the *Ruſſians* ruſſack. They take them in great numbers in ſnares, and export their ſkins to *England*, and other places, for the manufacture of hats. The *Ruſſians* and *Tartars*, like the *Britons* of old, hold the fleſh of hares in deteſtation, eſteeming it impure: that of the variable hare, in its white ſtate, is exceſſively inſipid.

III.—*The American Hare.*

THESE have their ears tipt with grey; the upper part of the tail black, the lower white: the neck and body mixed with aſh, ruſt colour, and black. Their legs are of a pale ferruginous colour; their belly white. Their fore-legs are ſhorter, and their hind ones longer in proportion than thoſe of the common hare. They meaſure eighteen inches in length, and weigh from three to four pounds and a half. They inhabit all parts of *North America*. In *New Jerſey*, and the colonies to the ſouth of that province, they retain their colour during the whole year. But to the northward, on the approach of winter, they change their ſhort ſummer fur, for one very long, ſilky and ſilvery, even to the roots, the edges of the ears only preſerving their colour. At that time, it is in the higheſt ſeaſon for the table, and is of vaſt uſe to thoſe who winter in *Hudſon's Bay*, where they are taken in vaſt abundance in ſprings made of braſs wire, placed in hedges, conſtructed on purpoſe, with

holes before the ſnares for the hares or rabbits to paſs through.

They breed once or twice a-year, and have from five to ſeven at a time. They do not migrate, like the preceding, but always haunt the ſame places. They do not burrow, but lodge under fallen timber, and in hollow trees. They breed in the graſs; but, in the ſpring, ſhelter their young in hollow trees, to which they alſo run when purſued. The hunters force them out of thoſe retreats, by means of a hooked ſtick, or by making a fire, and driving them out by the ſmoke.

IV.—*The Rabbit* *.

THE ears of the rabbit are almoſt naked. The colour of its fur, in a wild ſtate, is brown: its tail black above, and white beneath. In a tame ſtate, it varies to black, pied, and quite white. Of theſe laſt, the eyes are of a fine red. It inhabits, in a wild ſtate, the temperate and the warm parts of *Europe*, and even the hotteſt parts of *Aſia* and of *Africa*. It is not originally *Britiſh*, but ſucceeds here admirably well. It will not live in *Sweden*, and the northern countries, except it be kept in houſes. *Strabo* tells us, that they were imported into *Italy* from *Spain*. They are not natives of the weſtern hemiſphere, but have been carried thither, and increaſe greatly in *South America*. They are exceedingly prolific: they breed ſeven times in a year, and produce eight young at a time. If we ſuppoſe this to happen regularly, one pair

* Cuniculus of Pliny; Lepus Cuniculus of the Syſt. Nat.; Le lapin of Buffon; in Greek Δασυπους.

pair may produce in four years the amazing number of 1,274,840. They are ſtill more proliſic than the common hare. Theſe two ſpecies, though ſimilar, never intermix. Rabbits pair, and are ſaid to be faithful to their mates. They live to the age of eight or nine years. A *French* gentleman, who amuſed himſelf long with rearing rabbits, and obſerving their manners, remarked, that the offſpring paid great deference to their firſt father. Upon a call, which they were accuſtomed to obey, he always put himſelf at their head, and arrived firſt. He then ſtood at the mouth of their hole till they had all gone in. In warrens, they keep in their holes during the middle of the day, and come out in the morning and evening to feed. The males are apt to deſtroy the young; but their holes protect them from thoſe enemies that deſtroy ſuch vaſt numbers of young hares. Their ſkins are a great article of commerce; vaſt numbers of them are exported to *China*: their fur, like that of the other hares, is of great uſe in the hat manufacture.

The *Angora* rabbit, like the goat and cat of the ſame place, is remarkable for its hair, which is long, waved, and of a ſilky fineneſs.

The hooded rabbit is another variety ſtill more ſingular. It has a double ſkin over its back, into which it can withdraw its head; and another under its throat, into which it can withdraw its fore-feet. It has ſmall holes in the looſe ſkin on its back, to admit light to its eyes when its head is covered. Its body is aſh-coloured: its head and ears brown. It is preſerved in the Muſeum, inſcribed "A *Ruſſian* Rabbit;" but Mr. *Pennant* ſays it is unknown in that empire.

V.—*The Baikal Hare.*

THE tail of the *Baikal* hare is longer than that of the rabbit; in the male, the ears are longer in proportion than thoſe of the *varying* hare: its fur is of the ſame colour with that of the common hare. It is red about the neck and feet. Its tail is black above, and white beneath. Its ſize is between that of the common, and that of the varying hare. The name here given it marks its country. It extends from the lake *Baikal* as far as *Thibet*. The *Tanguts* call it *Rangwo*, and conſecrate it to the ſpots of the moon. It agrees with the common rabbit in the colour of its fleſh; but does not burrow. When purſued, it runs for ſhelter ſtraight to the holes of the rocks, without any circuitous doublings, like thoſe of the common hare; ſo that it agrees in nature, neither with the hare nor the rabbit. The *Mongols* call it *Tolai*. Its fur is bad, and is of no uſe in commerce.

VI.—*The Cape Hare* *.

THE long ears of the *Cape* hare are dilated in the middle. On the outſide they are naked, and of a roſe colour: their inſide and edges are covered with ſhort grey hairs. Its crown and back are duſky, mixed with tawny:

* Lepus Capenſis of the Syſt. Nat.

tawny: its cheeks and ſides aſh-coloured: its breaſt, belly, and legs, ruſt-coloured. Its tail, which it carries upwards, is of a pale ferruginous colour. It is of the ſize of a rabbit, and inhabits the country for three days march north of the *Cape* of *Good Hope*. It is there called the *mountain hare*; for it lives only in the rocky mountains, and does not burrow. It is difficult to ſhoot it, as, on the ſight of any one, it inſtantly runs into the fiſſures of the rocks. The ſame ſpecies probably extends as high as *Senegal*.

Allied to this, ſeems the *viſcachas*, mentioned by *Acoſta* * and *Feuillee* † in their acounts of *Peru*. They compare them to hares or rabbits, and ſay, that they inhabit the colder parts of the country; that their hair is very ſoft, and of a mouſe colour; that the tail is pretty long, and turned up; that the ears and whiſkers are like thoſe of the common rabbit. In the time of the *Incas*, their hair was ſpun, and wove into cloth, which was ſo fine, as to be uſed only by the nobility.

We come to the ſecond claſs of hares, thoſe *without tails*.

VII.—*The Brazilian Hare* ‡.

THE *Brazilian* hare, like the common kind, has very large ears, and a white ring round its neck. Its face is of a reddiſh colour; its chin is white; its eyes are black; and its colour like that of the common hare, only a little darker. Its belly is whitiſh. It has no tail; and ſome want

* Purchas Pil. iii. 966. † Obſer. Peru, 1725. 32.

‡ Lepus Braſilienſis of the Syſt. Nat.; Le Taphti of Buffon.

want the ring round the neck. They live in the woods; and are very prolific; and are reckoned very good meat. They do not burrow. They are found both in *Brazil* and in *Mexico*, where they are called *Citli*.

VIII.—*The Alpine Hare.*

THE *Alpine* hare has ſhort brown rounded ears, a long head, and very long whiſkers, with two very long hairs above each eye. Its fur is ferruginous, tipt with white, and intermixed with ſeveral long duſky hairs; but, at the firſt look, the whole animal ſeems of a bright bay. It is only about nine inches long. They are firſt ſeen on the *Altaic Chain*, and extend to lake *Baikal* in *Tartary*, and from thence to *Kamſchatka* and the *Fox Iſles*. They inhabit always the middle region of the ſnowy mountains, in the rougheſt places, wooded, and abounding with herbs and moiſture. They ſometimes burrow; but are more frequently found in crevices between the rocks, in pairs, or more, according to conveniency. In cloudy weather they aſſemble and lie on the rocks, and emit a ſound, ſo like that of a ſparrow, as to deceive the hearer. On the report of a gun, they run into their holes; but ſoon come out again, ſuppoſing it to be a clap of thunder, to which they are ſo much uſed in their lofty habitations. By wonderful inſtinct, they make a proviſion againſt the rigorous ſeaſon in their inclement ſeats. Towards autumn, a company of them collect vaſt heaps of choice herbs and graſſes, nicely dried, which they place either beneath the overhanging rocks,

rocks, or in the chaſms, or round the trunk of ſome tree. The way to theſe heaps is marked by a worn path. The heaps are formed like conoid ricks of hay, and are of various ſizes, according to the number of the ſociety employed in forming them. They are ſometimes of a man's height, and many feet in diameter, but uſually about three feet.

Thus, they wiſely provide their winter's ſtock, otherwiſe they muſt periſh, being prevented by the depth of the ſnow from quitting their retreats in queſt of food.

They ſelect the beſt of vegetables; and crop them when in the fulleſt vigour. Theſe they make into the beſt and greeneſt hay, by the judicious manner in which they dry them. Theſe ricks too are the origin of fertility amidſt the rocks; for their remains, mixed with the dung of the animals, rotting, in the otherwiſe barren chaſms, creates a ſoil productive of vegetables.

Theſe ricks are alſo of great ſervice to thoſe men who devote themſelves to the laborious employment of ſable hunting. Being obliged to go far from home, their horſes would often periſh for want, if not ſupported by the proviſions of theſe induſtrious little animals. The people of *Jakutz* are ſaid to feed both their horſes and cattle with the reliques of the winter ſtock of theſe hares. Such ſupply may be ſerviceable to ſome in the ſpring, when their own ſtock is exhauſted; but, ſhould they depend ſolely on theſe feeble mountaineers, they would deſerve to loſe both horſes and cattle every hard winter.

Theſe hares are neglected as food by man; but they are the prey of *ſables*, and of the *Siberian* weaſel,

ſel, which are joint inhabitants of the ſame mountains. They are likewiſe greatly infeſted by a ſort of gadfly, which, in Auguſt and September, lodges its eggs in their ſkin, which often proves fatal to theſe feeble and defenceleſs, though induſtrious creatures.

IX.—*The Ogotona Hare* *.

THE *Ogotona* hare has oblong oval ears, a little rounded; ſhorter whiſkers than the former ſpecies; fur long and ſmooth; light grey in the middle; white at the ends, intermixed with a few duſky hairs; with a yellowiſh ſpot on the noſe; and a ſpace about the rump of the ſame colour. Its limbs alſo are yellowiſh on the outſides, and its belly white. It is only about ſix inches long. The male weighs from ſix ounces and a half, to ſeven and a quarter; the female, from four to four and three quarters. It inhabits the ſame countries as the *Alpine* hare, and lives in the open vallies, and on gravelly or rocky naked mountains, under heaps of ſtones; but in a ſandy ſoil they burrow, leaving two or three entrances. Their holes run obliquely: in theſe they make their neſts of ſhort graſs. They wander out chiefly in the night. Their voice is exceſſively ſhrill, in a note like that of a ſparrow, twice or thrice repeated, but very eaſily to be diſtinguiſhed from that of the *Alpine* hare. They are fond of the bark of a ſort of *ſervice* tree, and of the dwarf elm. Before the approach of ſevere cold, they collect great quantities of herbs, and fill their holes with

* Lepus Ogotona. Pallas Nov. Sp. i. 59.

with them. Directed by the ſame inſtinct as the former ſpecies, they form, in autumn, their ricks of hay, of a hemiſpherical form, about a foot high and wide. In the ſpring, theſe elegant heaps diſappear. They copulate in the ſpring. About the latter end of June, their young are obſerved to be full grown. They are the prey of hawks, magpies and owls; but the cat *Manul* makes the greateſt havock among them. The ermine and fitchet are equally their enemies.

X.—*The Calling Hare.*

THIS ſpecies, called by the *Tartars Ittſitſkan*, or the *barking mouſe*, has a longer head in proportion to its ſize, which is very diminutive, than is uſual with hares. The head is thickly covered with fur, even to the tip of the noſe. It has large whiſkers: its ears are large and rounded: its legs are very ſhort; and its ſoles are furred beneath. Its whole coat is very long, ſoft and ſmooth; with a thick long fine down beneath, of a browniſh lead colour. The hair is of the ſame colour, of a light grey towards the ends, and tipt with black. The lower parts of the body are hoary: the ſides and ends of the fur are yellowiſh. Its length is about ſix inches: its weight from three ounces and a quarter, to four and a half. In winter they are ſcarcely two and a half. They inhabit the ſouth-eaſt parts of *Ruſſia*; but are found no where, in the eaſt, beyond the river *Oby*. They delight in ſunny vallies, and hills covered with herbs, eſpecially thoſe near the edges of woods, to which they run on any alarm. They live ſo concealed a life, as

very rarely to be ſeen; but are often taken in winter in the ſnares laid for the ermines. They chooſe, for their burrows, a dry ſpot, amidſt buſhes, covered with a firm ſod, preferring the weſtern ſides of the hills. Their place would ſcarely be known, but for their excrements; and even thoſe they drop, by a wiſe inſtinct, under ſome buſh, leſt their dwelling ſhould be diſcovered by their enemies among the animal creation.

It is their voice alone that betrays their abode. Their cry is like the piping of a quail, but deeper; and ſo loud, as to be heard at the diſtance of half a *German* mile. It is repeated, by juſt intervals, thrice, four times, and often ſix. This cry is emitted at night, and in the morning; but ſeldom in the day, except in rainy or cloudy weather. It is common to both ſexes; but the female is ſilent for ſome time after parturition, which happens about the beginning of May. She brings forth ſix at a time, blind and naked: ſhe ſuckles them often, and covers them carefully with the materials of her neſt.

Theſe moſt harmleſs and inoffenſive creatures never go far from their holes. They feed, and make their little excurſions by night; drink often; ſleep little, and are eaſily made tame. They will ſcarcely bite when handled; yet the males have been obſerved, when in confinement, to attack each other, and to expreſs their anger by a grunting noiſe.

Genus XXVII.—*The Beaver.*

This genus comprehends only two ſpecies; the caſtor and the muſk beaver. The generic marks are, two cutting teeth in each jaw; five toes on each foot; the tail compreſſed and covered with ſcales.

I.—*The Caſtor* *.

This wonderful animal has ſtrong cutting teeth, well adapted for the purpoſes for which nature deſigned them; ſhort ears hid in its fur; a blunt noſe; hair of a deep cheſnut brown; a tail broad, almoſt oval, compreſſed or flatted horizontally, and covered with ſcales. Its fore-feet are ſmall; the hind ones are large. Its length from noſe to tail is about three feet: its tail is eleven inches long, and three broad.

It inhabits *Europe*, from *Lapland* to *Languedoc*. They are found in great plenty in the north. A few are yet found in the *Rhone*, the *Danube*, the *Rhine*, and the *Viſtula*. They abound in the *Aſiatic* part of the *Ruſſian* empire; and are found in companies on the rivers that flow into the *Oby*. They are met with diſperſed, or in the ſtate of *terriers*, as thoſe are called, in the wooded parts of *Independant Tartary*, and in the mountains

† Καστωρ. Ariſt. lib. viii. c. 5. Caſtor Fiber of the Syſt. Nat.; Le Caſtor, ou Le Bievre de Buffon.

which border on *Siberia*. None of them are to be ſeen in *Kamſchatka*, owing to the interruption of the woods.

They are the moſt induſtrious of all animals. Nothing equals the art with which they conſtruct their dwellings. They chooſe a level piece of ground, with a ſmall rivulet running through it. This they form into a pond, by making a dam acroſs; firſt by driving in the ground ſtakes five or ſix feet long, placed in rows, wattling each row with pliant twigs, and filling the interſtices with clay or mortar, ramming it down cloſe. The ſide next the water is ſloped, the other is perpendicular. The bottom of the dam-dike is from ten to twelve feet thick; but the thickneſs gradually diminiſhes, owing to the ſlope on the one ſide. At the top, it is about two or three feet thick. The length of theſe dams is ſometimes not leſs than an hundred feet.

Their houſes are made in the water, collected by the dam, and are placed near the edge or ſhore. They are built on piles, and are either round or oval; but their tops are vaulted; ſo that their inſide reſembles an oven, the top a dome. The walls are two feet thick, made of earth, ſtones and ſticks, moſt artificially laid together, and as neatly plaiſtered as with a trowel. In each houſe there are two openings, one to the water, the other towards the land. The height of theſe houſes above the water is eight feet. They frequently make two or three ſtories in each dwelling, for the convenience of change, in caſe of floods. Each houſe contains from two to thirty beavers; and the number of houſes in each pond, is from ten to twenty-five. Each beaver forms its bed of moſs; and each family forms its magazine of winter proviſion, which conſiſts of bark and boughs of trees.

This

This they lodge under water, and fetch into their apartments, as their wants require. *Lawſon* in his hiſtory ſays, they are fondeſt of the *ſaſſafras*, aſh and ſweet gum. Their ſummer food is leaves, fruits, and ſometimes crabs and craw-fiſh; but they are not fond of fiſh, and will not eat fleſh.

To effect theſe works, a community of two or three hundred aſſembles; each bears his ſhare in the labour: Some, by gnawing with their teeth, fell trees of great ſize, to form beams or piles; theſe are gnawed all round, in as regular a manner as a cutter cuts in felling a tree, bringing the bottom of the wood to a point: others roll the pieces along to the water: Some dive, and, with their feet, ſcrape holes to place them in; while others exert their efforts to rear them in their proper places. Another party is employed in collecting twigs to wattle the piles with; a third in collecting earth, ſtones, and clay; a fourth is buſied in beating and tempering the mortar: others in carrying it on their broad tails to proper places, and, with the ſame inſtrument, they ram it between the piles, or plaiſter the inſide of their houſes. A certain number of ſmart ſtrokes with the tail, is a ſignal given by the overſeer, for repairing to ſuch and ſuch places, either for mending any defects, or on the approach of an enemy; and the whole ſociety attend to it with the utmoſt care. Their time of building is early in the ſummer; for in the winter they never ſtir but to their magazines of proviſions; and, during that ſeaſon, they are very fat. They breed only once a-year, and bring forth, in the latter end of winter, two or three young at a birth.

Beſides

Beſides theſe aſſociated beavers, there is another ſort, called *Terriers*, which either want induſtry or ſagacity to form houſes like the others. They burrow in the banks of rivers, making the mouth of their holes beneath the freezing depth of the water, and work up for a great number of feet. Theſe alſo form a winter ſtock of proviſions.

Beavers vary in their colours. The fineſt are black; but the general colour is a cheſnut brown, more or leſs dark. Some have been found, but very rarely, entirely white; others ſpotted. Their ſkins are a prodigious article of trade, being the foundation of the hat manufactory. There were ſold, in a ſingle ſale of the *Hudſon's Bay* Company in 1763, no fewer than 54,670 ſkins. They are diſtinguiſhed by different names. *Coat beaver* is what has been worn by the *Indians*; *parchment beaver*, has its name from its reſemblance to parchment; but *ſtage beaver* is the worſt, and is that which the *Indians* kill out of ſeaſon in their ſtages or journies.

The valuable drug *Caſtoreum* is taken from the inguinal glands of theſe animals. The *Ruſſian* Caſtoreum ſells for two guineas a pound; the *American* for eight ſhillings and ſixpence only; yet vaſt numbers of beaver ſkins are imported to *Ruſſia*. Their fleſh is reckoned good eating, being preſerved after the bones are taken out, by drying it in the ſmoke.

The ancients had a notion that the Caſtoreum was lodged in the teſticles, and that the animal, when hard purſued, would bite them off, and leave them to its purſuers, as if conſcious of what they wanted to deſtroy him for.

Imitatus

Imitatus caſtora, qui ſe
Eunuchum ipſe facit, cupiens evadere damno
Teſticulorum.

JUVENAL, XII. 34.

Juſt as the beaver, that wiſe thinking brute,
Who, wiſhing to eſcape the hard purſuit,
Bites off the parts, the cauſe of all the ſtrife,
And leaves them as a ramſom for his life.

DRYDEN.

II.—*The Muſk Beaver* *.

THIS ſpecies is of a ſmaller ſize; but, in the form of its body, it exactly reſembles the caſtor beaver. It is only one foot in length; and its tail meaſures nine inches. It has a thick blunt noſe; ſhort ears, almoſt hid in the fur, like thoſe of the former ſpecies; and large eyes. The toes on each foot are ſeparated; thoſe behind are fringed on each ſide with ſtrong hairs, cloſely ſet together. Its tail is compreſſed ſideways, and is very thin at the edges, and covered with ſmall ſcales, intermixed with a few hairs. The colour of its head and body is a reddiſh brown: its breaſt and belly are of an aſh colour, tinged with red: its fur is very fine. It inhabits *North America*; breeds three or four times in a year; and brings from three to ſix young at a time. During ſummer, the male and female live together: at the approach of winter, they unite into families, and retire into

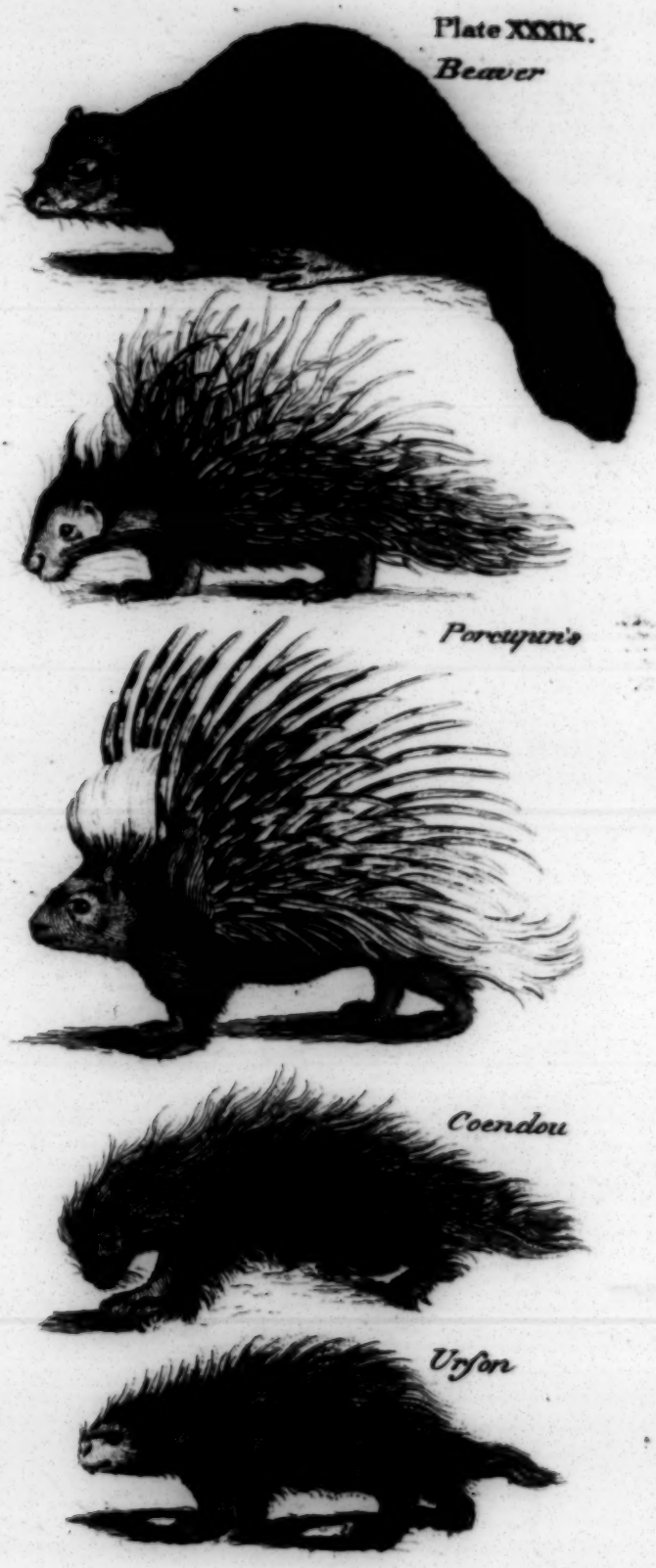
* Caſtor Zebethecus of the Syſt. Nat.

to ſmall round edifices, covered with a dome, formed with herbs, and reeds cemented with clay. At the bottom of their habitations are ſeveral pipes, through which they paſs in ſearch of food; for they do not form magazines like the caſtor beavers. During winter, their houſes are covered many feet deep with ſnow and ice; but they creep out, and feed on the roots that lie beneath. They quit their old habitations annually, and build new ones. Their fur is fine, and much eſteemed. During ſummer, the whole animal has a moſt exquiſite muſky ſmell, which it loſes in the winter.

Perhaps the ſcent is derived from the *Calamus Aromaticus*, a favourite food of this animal. It is ſaid they are very good to eat.

It has been alleged, that the beaver is among quadrupeds what the bee is among the inſect tribes; and that as the bat forms the link that connects beaſts and birds, ſo the beaver, reſembling a land animal in his forepart, and a fiſh in his hind, he is the link that joins beaſts and fiſhes: but, perhaps, the *flying macauco* and the *ſeal*, as well as ſome others, may, with equal juſtice, claim thoſe honours. We ſhall not take it upon us to ſettle the diſpute.

Plate XXXIX.



GENUS XXVIII.—*The Porcupine.*

THIS genus is diſtinguiſhed by two cutting teeth in each jaw; a body covered with long, hard and ſharp quills, and a divided upper lip. It contains only five ſpecies.

I.—*The Creſted Porcupine* †.

THIS ſpecies derives its name from a long creſt of ſtiff briſtles on the top of its head, reclining backwards. The quills on the hind part of the body are nine inches in length, very ſharp at the ends, and varied with black and white. Between the quills there are a few hairs. Its head, belly and legs are covered with ſtrong briſtles, terminated with ſoft hair of a duſky colour. It has long whiſkers, and ears like thoſe of the human body; four toes before, and five behind. Its length is about two feet: its tail, which alſo is covered with quills, meaſures four inches only. It inhabits *India*, the ſand hills to the ſouth-weſt of the *Caſpian Sea*, *Southern Tartary*, *Perſia* and *Paleſtine*, and all parts of *Africa*. It is found wild in *Italy*; but at the ſame time it is thought not to have been orignally a native of *Europe*. It is bought in the markets of *Rome* for the table. The *Italian* porcupines have ſhorter quills, and a leſs creſt than

† Τραξ of Ariſt. Hyſtrix of Pliny. Hyſtrix criſtata of the Syſt. Nat. Le Porc-epic De Buffon.

thoſe of *Aſia* and *Africa*. It is harmleſs; lives on fruits, roots and vegetables; ſleeps by day, and feeds by night. The ſtory of its darting its quills when irritated, is fabulous: when attacked, it retires and runs its noſe into a corner; erects its ſpines, and oppoſes them to an aſſailant: it makes a kind of ſnorting noiſe. Some of theſe animals produce a bezoar. Theſe bezoars were once very highly valued, and have been ſold for five hundred crowns a-piece.

II. —*The long-tailed Porcupine* *.

THE long-tailed porcupine has alſo long whiſkers; large bright eyes; and ſhort naked ears. His body is ſhort and thick, and covered with long ſtiff hairs, as ſharp as needles, of different colours, as the rays of light fall on them. His feet are divided into five toes; that which ſerves as a thumb turns backwards. The tail is as long as the body, very ſlender at the end, which conſiſts of a thick tuft. The briſtles are thick in the middle, appear as if jointed, and riſe one out of the other like grains of rice. They are tranſparent, and of a ſilvery appearance.

It inhabits the iſles of the *Indian Archepelago*, and lives in the foreſts.

* Hyſtrix macroura of the Syſt Nat.

III.—*The Brazilian Porcupine* *.

THE *Brazilian* porcupine has a ſhort blunt noſe, long white whiſkers, and a bed of ſmall ſpines beneath the noſe. The top of its head, its back, its ſides, and the baſe of its tail, are alſo covered with ſpines. The longeſt of theſe on the lower part of the back and tail are about three inches long, very ſharp, and white, barred near their points with black. They adhere cloſe to the ſkin, which is quite naked between them; and are ſhorter and weaker as they approach the belly. On the breaſt, belly, and lower parts of the legs, they are converted into dark brown briſtles. Its feet are divided into four toes each, with very long claws, and a great protuberance on the place of the thumb. Its tail is eighteen inches long, ſlender and taper towards the end; for the laſt ten inches it is almoſt naked, having only a few hairs upon it; but, for that ſpace, it has a ſtrong prehenſile quality.

It inhabits *Mexico* and *Brazil*: it lives in the woods, and preys, not only on fruits, but alſo on poultry: it ſleeps by day, and preys by night; and generally makes a noiſe with its noſtrils, as if out of breath: it grunts alſo like a ſow. It climbs trees, but very ſlowly: in deſcending, for fear of falling, it twiſts its tail round the branches: it ſpends no more arrows in darting its quills than the reſt: it grows very fat; and its fleſh is ſaid to be very white and good. They may be tamed.

* Hyſtrix prehenſilis of the Syſt. Nat.

Piſo ſays there is a greater and a leſſer kind of this ſpecies.

IV.—*The Mexican Porcupine* *.

THE *Mexican* porcupine is of a duſky colour, with long briſtles intermixed with its down. Its ſpines are three inches long, ſlender, and varied with white and yellow; but they are ſcarcely apparent, except on the tail, which is thicker and ſhorter than that of the preceding ſpecies: from the middle to the end it is free from ſpines. It grows to the bulk of a middle-ſized dog. It inhabits the mountains of *Mexico*, lives on the ſummer fruits, and may eaſily be made tame. The *Indians* pulverize the quills, and ſay they are very efficacious as a remedy for the gravel; and that applied whole to the forehead, they will relieve the moſt violent headach. They adhere till filled with blood, and then drop off.

V.—*The Canada Porcupine* †.

THE porcupine met with in *Canada*, and the other parts of *North America*, as high as *Hudſon's Bay*, has ſhort ears hid in its fur. Its head, body, legs, and the upper part of its tail, are covered with ſoft, long, dark brown hair: on the upper part of the head, back, body and tail, there are numbers of ſharp ſtrong quills. The longeſt, meaſuring about three inches, are on the back, the leaſt

* Le Coendou of Buffon. † Hyſtrix dorſata of the Syſt. Nat.

leaſt towards the head and ſides; but they are all hid in the hair. There are ſome ſtiff ſtraggling hairs intermixed, three inches longer than the reſt, and tipt with a dirty white. The under ſide of its tail is white. It has four toes on the fore-feet, five behind, each armed with long claws, hollowed on their under ſide. The form of its body is exactly that of a beaver; but it is not half the ſize. One brought from *Newfoundland* was about the ſize of a hare, but more compactly made. Its tail was about ſix inches long. They vary in colour. One in the *Leverean* muſeum is entirely white.

They make their neſts under the roots of great trees, and will alſo climb among the boughs. The *Indians* kill them by ſtriking them over the noſe. They are very plentiful near *Hudſon's Bay*; and many of the trading *Indians* depend on them for food, eſteeming them both wholeſome and pleaſant. They feed on wild fruits and the bark of trees, eſpecially the juniper. They eat ſnow in winter, and drink water in ſummer; but avoid going into it. When they cannot avoid their purſuer, they will ſidle towards him, in order to touch him with their quills, which ſeem but weak weapons of defence; for on ſtroking the hair, they will come out of the ſkin ſticking to the hand. The *Indians* apply them to various purpoſes; for piercing their noſes and ears, to make holes for their ear-rings, and other finery: they alſo trim their deer ſkin habits with fringes made of the quills, or cover with them their bark boxes.

GENUS XXIX.—*The Marmot.*

THIS genus of ſmall quadrupeds contains eight ſpecies, diſtinguiſhed by the following marks: two cutting teeth in each jaw; four toes before, and five behind; ſhort ears, or none; the tail covered with hair, and of a meddling length; in ſome very ſhort.

I.—*The Alpine Marmot* †.

THE *Alpine* marmot has ſhort round ears hid in the fur, and large cheeks. The colour of its head, and the upper part of its body, is a browniſh aſh, mixed with tawny. Its legs, and the lower part of the body, are reddiſh: its tail is ſomewhat buſhy: its body is thick; about ſixteen inches long; a luſty *mouſe*, if *Pliny* will have it ſo: its tail is about ſix inches,

This curious animal inhabits the loftieſt ſummits of the *Alps* and *Pyrenæan* mountains, and feeds on inſects, roots and vegetables. While they are feeding, they place a centinel, who gives a whiſtle when he ſees any ſign of danger, on which they inſtantly retire into their holes. They form their holes under ground, with three chambers of the ſhape of the letter Y, with two entrances, and line them well with moſs and hay. They retire

† The Mus Alpinus of Pliny. The Mus Marmota of the Syſt. Nat.

retire into theſe ſubterraneous habitations about Michaelmas; and ſtopping up the entrances with earth, they continue in a torpid ſtate till April. If taken out, they remain inſenſible, unleſs brought before a fire, which revives them. They lodge in ſociety, from five to a dozen in a chamber. They frequently walk on their hind feet. They ſit up on end to eat their food, and lift it to their mouth with their two fore-paws. They bring three or four young at a time, and are very playful. When angry, or before a ſtorm, they make a moſt ſtrange noiſe; a whiſtle ſo loud and ſo acute, as to pierce the ear. They grow very fat about the back, and are ſometimes eaten; but, in general, they are taken only to be ſhewn, eſpecially by the *Savoyards*. They grow very ſoon tame, and will then eat any thing. They are very fond of milk, making at the ſame time a murmuring noiſe, expreſſive of their ſatisfaction. They are very apt to gnaw any clothes or linen they can find. Like cats, they have an antipathy againſt dogs. Though not ſo large as hares, they are ſtouter, and have a peculiar ſuppleneſs and dexterity. In their torpid ſtate, they ſometimes weigh twenty pounds, and continue plump for three months; but afterwards decay, and are very much emaciated at the end of winter. Thoſe fed in houſes, and kept warm, never become torpid; but are equally lively and active in winter as in ſummer.

II.—*The Quebec Marmot.*

THE *Quebec* marmot is rather larger than a rabbit: it has a black blunt noſe; ſhort rounded ears; cheeks puffed, of a grey colour; and a duſky face. The hair on its back is grey at bottom, black in the middle, with whitiſh tops. Its belly and legs are of an orange colour: its toes are black, naked, and quite divided. It has four toes, and the rudiments of another, on the fore-feet; five behind. Its tail is ſhort, and of a duſky colour. It inhabits *Hudſon's Bay* and *Canada*, and may be tamed.

III.—*The Maryland Marmot* *.

THE *Maryland* marmot is about the ſize of a rabbit. Its ears are ſhort and rounded; its eyes black and prominent. Its noſe is ſharper than that of the laſt. Its noſe and cheeks are of a bluiſh aſh colour: its back of a deep brown: its ſides and belly paler. Its tail is half the length of its body, covered with pretty long duſky hair: its toes are divided, and armed with ſharp claws. It has four before, and five behind. Its feet and legs are black. It inhabits *Virginia* and *Pennſylvania*. During winter, it ſleeps under the hollow roots of trees. It lives on wild fruits, and other vegetables. Its fleſh is reckoned very good eating. It taſtes like that of a pig. When ſurpriſed, it retreats into holes. It is found in the *Bahama*

* The Mus Monax of the Syſt. Nat.

Plate XXXVIII.

1. ALPINE MARMOT 2. MARMOT OF CANADA



3. CAPE MARMOT 4. SOUSLIK 5. SQUIRREL

bama iſles alſo; but it is probable it does not ſleep during the winter in that climate.

IV.—*The Hoary Marmot.*

THE Hoary Marmot, about the ſame ſize as the former, derives its name from its appearance. It inhabits the northern parts of *North America*. The tip of its noſe is black: its ears are ſhort and oval: its cheeks are whitiſh. Its colour is duſky and tawny: its hair is coarſe and long, aſh-coloured at the root, black in the middle, and whitiſh at the tip; whence it has that hoary look. Its legs are black; its claws duſky, four before, five behind: its tail is black, mixed with ruſt colour.

V.—*The Robuck Marmot,*

THE robuck, or robak, as it is called by ſome, has ſmall oval thick ears, covered with greyiſh white down, with long hair on their edges, ſmall eyes, and ſmall whiſkers. It is of a duſky brown about the eyes and noſe: the upper part of the body is greyiſh, intermixed with long black or duſky hairs, tipt with grey: its throat is ruſt-coloured, as alſo the reſt of the body, and the inſide of the limbs. It has four toes on the fore-feet, with a ſhort thumb furniſhed with a ſhort claw; five toes behind. Its tail is ſhort and ſlender, but ſomewhat buſhy, about four inches long, to the point of its hair five: the animal itſelf, from the noſe to the tail, meaſures ſixteen. It inhabits the high but milder and ſunny ſides of mountainous countries, and ſeeks dry ſituations, and ſuch as

are full of ſprings, woods, or ſand. They are found in *Poland* and the ſouth of *Ruſſia*: they ſwarm in the *Ukraine*, and to the eaſtward. They are very common in *Kamſchatka*, but rarely reach as high as lat. 55. They burrow extremely deep, and obliquely, to the depth of two or three yards. They form numbers of galleries, with one common entrance from the ſurface: each gallery ends in the neſt of its inhabitant. In very hard and rocky places, from twenty to forty of theſe animals join together to facilitate the work, and live in ſociety, each with its neſt at the end of its reſpective gallery. In each neſt they collect, eſpecially towards autumn, the fineſt hay, and in ſuch plenty, that one neſt would ſuffice for a night's food for a horſe. During the middle and ſunny part of the day, they ſport about the entrance of their holes, but ſeldom go far from them: on the ſight of man, they retire with a ſlow pace, and ſit upright near their hole's mouth, and give a frequent whiſtle, ſtill liſtening the enemy's approach. In places where they live in families, they always place a ſentinel to give notice of any danger during the time the reſt are feeding.

They are fond of pot herbs: in a ſtate of confinement, they eat cabbages and bread very greedily, and drink milk with great eagerneſs; but will not taſte water. They are mild and good-natured; they very ſoon become tame, even when taken full grown. The young ones become familiar immediately. They breed early; for in June, the young are half the ſize of the old: the females have eight teats each. They lie torpid during the winter like the other ſpecies of their genus, except thoſe that are kept in the warm ſtoved rooms of their country; and even then, finding a defect of that warmth which the ſnug neſt of their ſubterranean retreat would afford, in cold nights, they creep for ſhelter into the very beds

beds of the inhabitants. In that ſtate, they will not abſolutely refuſe food, but eat very little, and that with a ſeeming diſguſt; nature allotting them in the wild ſtate a long ſleep and ceſſation from food, the reſult of plenitude previous to its commencement. They ſometimes eſcape from confinement, find a retreat, and get their winter's ſleep, and return to their maſters in the ſpring; but in that caſe they ſeem to have loſt much of their gentle manners. They grow very fat. The *Calmucs* take them in ſmall nets, with large meſhes placed before their holes. Their ſkins are uſed for cloathing: their fleſh taſtes ſomewhat like that of a hare, but is rank. The *Calmucs* are very fond of the fat ones, and even eſteem them medicinal. On the contrary, the *Mahometan Tartars* not only abſtain from their fleſh, but even protect them from injury; ſo that near their herds they are extremely numerous. Theſe *Tartars* eſteem it a very fortunate circumſtancee to have a warren of robucks near them, and think it a ſin to kill one of them, a dove, or a ſwallow; but at the ſame time abominate the following ſpecies.

In *Chineſe Tartary*, they are the propagators of *rhubarb*, which grows among their burrows. The manure which they leave about its roots, contributes to its increaſe; and the looſe ſoil they fling up proves a bed for the ripe ſeed, which, if ſcattered among the long graſs, periſhes without ever being able to reach the ground.

VI.—*The Earleſs Marmot* *.

THIS ſpecies is marked by its want of ears, a white line over each eye, yellow teeth, long black whiſkers, and an aſh-coloured face. The hind-part of its head, and its whole back, are of a pale yellowiſh brown, often diſtinctly ſpotted with white, ſometimes undulated with grey: the under ſide of the body and legs are of a yellowiſh white: its tail is covered with long hair, brown above, bordered with black, each hair tipped with white: its under ſide is of a bright ruſt. The three middle toes of the fore-feet are long, armed with long ſharp claws: the exterior and interior toes are ſhort; the laſt lies remote from the others, with a ſhort blunt claw.

The length of the animal is about one foot; of its tail, to the end of the hairs, four inches and a half. It inhabits *Bohemia*, *Hungary*, and from the banks of the *Wolga* to *India* and *Perſia*, *Siberia*, *Great Tartary*, *Kamſchatka*, and even the continent of *America* itſelf. It burrows, and forms its magazine of corn, nuts, &c. for its winter food. Like the ſquirrel, it ſits up while it eats. Some inhabit the fields of *Siberia*, others penetrate into the granaries. The firſt form holes under the ground with a double entrance, where they ſleep during winter; thoſe which inhabit granaries keep in motion even during the cold ſeaſon. About the *Lena*, they couple at the beginning of May; but about *Aſtracan* much earlier. They bring from five to eight young ones, which they bring up in their burrows: only one inhabits each burrow:

* Mus Cibellus of the Syſt. Nat. Le Ziſel et Le Souslik, de Buffon.

row: the males are always, except in the coupling ſeaſon, ſeparate from the females. They whiſtle like the former ſpecies, are very iraſcible, and bite hard. They often quarrel with and tear each other; yet they ſit in multitudes near their holes. They are very fond of ſalt, and are taken in great numbers on board the barges loaden with that commodity on the rivers. They are both herbiverous and carniverous. They feed on plants, and deſtroy the young of birds and mice. The ladies of *Bohemia* were wont to make cloaks of their ſkins: they are now uſed only for linings, and appear very beautiful for that purpoſe.

VII. & VIII.—*The Gundi and Tail-leſs Marmot.*

These conſtitute the ſeventh and eight ſpecies of this genus. The former, of the ſize of a ſmall rabbit, and of a red colour, inhabits *Barbary*, towards *Mount Atlas*. It has truncated ears, with large apertures, and a ſhort tail. Its upper fore-teeth are truncated; the lower, ſlender and pointed. It has four toes on each foot, furniſhed with claws, and walks on the hind feet as far as the heel.

The latter inhabits *Hudſon's Bay*. It has ſhort ears; two cutting teeth above, and four below; its head and body are of a cinereous brown; but the ends of the hairs are white.

Genus XXX.—*The Squirrel.*

This genus contains no fewer than twenty different ſpecies, with ſeveral ſubordinate varieties. Its diſtinguiſhing marks are two cutting teeth in each jaw; four toes before, five behind; and a long tail cloathed with long hair.

I.—*The Common Squirrel* *.

The ears of the common ſquirrel are terminated with long tufts of hair. It has large, lively black eyes. Its head, body, legs, and tail, are of a bright reddiſh brown; its breaſt and belly are white: the hair on each ſide of its tail lies flat. In *Sweden* and *Lapland*, it changes its colour to grey in winter. In many parts of *England* there is a beautiful variety of this ſpecies, with milk-white tails.

This ſpecies of the ſquirrel inhabits *Europe*, the northern and temperate parts of *Aſia*, and a variety of it is found as far ſouth as the iſle of *Ceylon*. It is a neat lively active animal, lives always in the woods. In the ſpring, the female is ſeen purſued from tree to tree by the males, feigning an eſcape from their embraces. They make their neſts of moſs and dried leaves, in the fork of two branches, with two entrances to each, and ſtop up that

* Sciurus Vulgaries of the Syſt. Nat. L'Ecureuil of Buffon.

Plate XL



1. GRAY SQUIRREL 2. PALM SQUIRREL
3. BARBARY SQUIRREL 4. COQUALLIN

that on the ſide from which the wind blows. The females bring three or four young at a time. They lay in a hoard of winter proviſions; ſuch as nuts, acorns, &c. In ſummer, they feed on buds and young ſhoots, and are particularly fond of thoſe of fir, and of the young cones. They ſit up to eat, and uſe their fore-feet as hands. They cover themſelves with their tail. They are remarkably agile, and leap to a ſurpriſing diſtance. When they are diſpoſed to croſs a river, a piece of bark ſerves each for a boat, and its own tail for a ſail.

The large grey ſquirrel of the *Teleutian Tartars*, near the river *Oby*, is as large again as the common grey ſquirrel, and is preferred to them on account of the ſilvery gloſs of its ſkin.

A white variety is found common in *Siberia*, and a beautiful black variety about *Lake Baikal*.

The white legged Squirrel in the *Britiſh* Muſeum, ſaid to have been brought from the iſland *Ceylon*, forms another variety. Its upper parts and its toes are of a reddiſh brown; its face and noſe, the under ſide of its neck, its belly, fore-legs, and the inſide of its ears and thighs, are white: its ears are ſlightly tufted with black: its tail is long, and covered with duſky hairs, but much ſhorter than thoſe of the *European* kind.

II. & III.—*The Ceylon* and *the Abyſſinian Squirrel.*

We have joined theſe two in the ſame ſection, as Mr. *Pennant* ſeems to ſuſpect that the latter may be only a variety of the former; and indeed it muſt be obvious, that when naturaliſts deſcribe ſpecies from ſingle ſubjects, there is ſome danger of their multiplying the ſpecies from

ſlight

ſlight variations obſervable in different individuals belonging to the ſame ſpecies.

The *Ceylon* Squirrel has its ears tufted with black; a fleſh-coloured noſe; cheeks, legs, and belly, of a pale yellow, with a yellow ſpot between its ears: its forehead, ſides, back, and haunches, are black: its cheeks are marked with a forked ſtroke of black: its tail is twice as long as the body, of a light grey, and very buſhy. The part of it next the body is quite ſurrounded with hair: on the reſt of it the hairs are ſeparated and lie flat. It is thrice the ſize of the *European* ſquirrel.

The *Abyſſinian* Squirrel, deſcribed by *Thevenot*, is of the ſame ſize with that found in *Ceylon*; but he ſays that its belly and fore-feet were grey, and that its ſoles were fleſh-coloured: that it was very ſportive and good-natured like the common ſquirrel; that it would eat any thing except fleſh, and would crack the hardeſt almonds.

IV. V. VI.—*The Javan*, *Bombay*, and *Ruddy Squirrel.*

As theſe three are all from the *Eaſt Indies*, they may be claſſed together. That of *Java*, diſcovered and briefly deſcribed by *Sparman*, is black on the upper part of the body, and brown on the lower: the end of its tail is black, and its thumb has a round nail. Though it inhabits *Java*, that of *Ceylon* and this are probably only varieties of the ſame ſpecies.

The *Bombay* Squirrel has tufted ears too, but its upper parts are of a dull purple, its lower yellow, and the nd of its tail orange. From noſe to tail, it meaſures near ſixteen inches; its tail ſeventeen.

The

The *ruddy* ſquirrel inhabits *India*: it is larger than the common ſquirrel: its ears are ſlightly tufted: its colour above is yellow, mixed with duſky; below of a blood red, inclining to tawny. Its tail is ſlender, of the ſame colour, marked lengthways with a black ſtripe. It has four toes on the fore-feet, with a remarkable protuberance inſtead of a thumb; and five toes on the hind-feet.

VII.—*The Grey Squirrel* †.

THE grey ſquirrel is about the ſize of a half grown rabbit, and has plain ears: its hair is of dull grey colour, mixed with black, and often tinged with dirty yellow: its belly, and the inſides of its legs, are white: its tail is long, buſhy, grey, and ſtriped with black. It inhabits the woods of *North America*, *Peru and Chili*. In *North America* they are very numerous, and do incredible damage to the plantations of maize, as they run up the ſtalks, and eat the young ears. Vaſt flocks of them deſcend from the mountains, and join thoſe that inhabit the lower parts. They are proſcribed by the provinces; and a reward of threepence *per* head offered for every one that is killed. Such a number of them was deſtroyed in one year, that *Pennſylvania* alone paid in rewards 8000l. They make their neſts in hollow trees, with moſs, ſtraw, wool, &c. They feed on the maize in its ſeaſon, on pine cones, acorns, and maſt of all kinds. They form holes under ground, and there depoſite a large ſtock of winter proviſion. They are par-

† The Sciurus Cinereus of the Syſt. Nat. Le Petit Gris of Buffon.

ticularly buſy at the approach of bad weather; but their ſtores are frequently plundered by the hogs. During the cold weather, they keep in their neſts for ſeveral days together; and when the ground is covered with deep ſnow, they often periſh for want of food. They ſeldom leap from tree to tree, but only run up and down their trunks. They are not eaſily ſhot, as they change their place with great nimbleneſs when they ſee a gun levelled. They have moſt of the actions of the common ſquirrel: they are eaſily tamed; and their fleſh is eſteemed very delicate. The furs, which are imported under the name of *petit gris*, are valuable, and uſed as linings to cloaks.

VIII.—*The Black Squirrel.*

THIS ſpecies has plain ears, and is ſometimes wholly black, but often marked with white on the noſe, the neck, or the end of the tail. The tail is ſhorter than that of the former; but the body is equal. It inhabits the north of *Aſia*, *North America*, and *Mexico*. It is equally numerous and deſtructive as the former ſpecies, which it reſembles alſo in the manner of making its neſt, and laying up a ſtock of winter proviſion; ſo that we ſhould have been ready to reckon it only a variety, did not Mr. *Cateſby* expreſsly ſay, that it breeds and aſſociates in ſeparate troops.

There is a variety of this ſpecies in *Virginia*, called by the planters there the cat ſquirrel. It is of the ſize of the grey ſquirrel, has plain ears, coarſe fur, mixed with dirty white and black; but varies to white. Its throat, and the inſide of its legs and thighs, are black.

Its

Its tail is much ſhorter than thoſe of ſquirrels uſually are, and is of a dull yellow colour, mixed with black.

IX. X. XI.—*The Hudſons Bay, the Varied, and the Fair Squirrel.*

THESE, with ſome others, are all *Americans*, and differ chiefly in colour and ſize.

The *Hudſons Bay* ſquirrel is ſmaller than the *European*, has plain ears, and is marked along the back with a ferruginous line from head to tail. Its ſides are paler: its belly is of a pale aſh colour, mottled with black: its tail is neither ſo long nor ſo buſhy as that of the common kind; but it is of a ferruginous colour, barred with black.

The *Carolina* ſquirrel is a variety of the ſame ſpecies. Its head, ſides and back are grey, white and ruſt colour intermixed. Its belly is white, and is divided from the ſides by a ferruginous line. The lower parts of the legs are red. The tail is brown, mixed with black, and edged with white. Theſe are alſo leſs than the *European* ſquirrels: they vary in colour; but in moſt the grey predominates.

The *varied ſquirrel* has plain ears: the upper part of its body is varied with black, white and brown: its belly is tawny. It is twice the ſize of the common ſquirrel. It inhabits *Mexico*, lives under ground, lays in a ſtock of winter food: it lives on maiſe, but is never to be tamed

The *fair* ſquirrel, the *ſciurus flavus* of *Linnæus*, is of a very ſmall ſize. Its body and tail are of a flaxen colour. It has plain round ears, and a rounded tail, and inhabits the wood near *Amadabad*, the capital of *Guzarat*, where they are to be ſeen in great abundance, leaping from tree to tree. *Linnæus* ſays it is an inhabitant of *South America*.

XII. XIII.—*The Brazilian, and the Mexican Squirrel.*

THESE are alſo both natives of *America*. The former, a ſmall creature eight inches long, is covered with ſoft duſky hairs, tipt with yellow. Its tail, which is ten inches long, is annulated with black and yellow. Its throat is cinereous. The inſide of its legs and its belly are yellow. Its belly is divided lengthways with a white line, which begins on the breaſt, is interrupted for a ſmall ſpace in the middle, and then continued to the tail. It inhabits *Brazil* and *Guiana*.

The *Mexican* ſquirrel is of a mouſe colour. The male is marked on the back with ſeven white lines, which extend along the tail; the female with only five. The *ſcrotum* of the male is pendulous like a goat's.

XIV.—*The Palm Squirrel.*

THE *palm* ſquirrel has plain ears, an obſcure pale yellow ſtripe on the middle of the back, another on each ſide, and a third on each ſide of the belly. The two laſt

laſt in ſome are very faint: the reſt of the hair on the back, ſides, and head, is black and red, very cloſely mixed; on the thighs and legs redder: the belly is of a pale yellow. The hair on the tail is coarſe, and does not lie flat: it is of a dirty yellow, barred with black.

Poſſibly they may vary with reſpect to the number of ſtripes. They live much in cocoa trees, and are very fond of palm wine. Some authors ſay, that this ſpecies does not erect its tail like the other ſquirrels, but expands it ſide ways.

XV.—*The Barbary Squirrel.*

THE *Barbary* ſquirrel has full black eyes, with white orbits. Its head, body, feet and tail, are cinereous, inclining to red, lighter on the legs. Its ſides are marked lengthways, with two white ſtripes. Its belly is white: its tail buſhy, marked regularly with ſhades of black. It is of the ſize of the common ſquirrel. Both this and the former ſpecies inhabit *Barbary*, and live in trees, eſpecially the palm.

There is another variety, common in *Java* and *Princes Iſland*, which alſo derives its name from the tree which is its favourite reſidence (though it is alſo common in tamarind trees) the *plantane ſquirrel*. It reſembles the common ſquirrel, but is lighter coloured, and has a yellow line extending along its ſides from leg to leg. It is a very ſhy creature, and retreats at the ſight of mankind.

We come now to a ſecond diviſion of this genus, marked by a membrane extended from the fore to the hind leg of each ſpecies.

XVI.—*The Sailing Squirrel* *.

NAMES are neceſſary for diſtinction; but may ſometimes miſlead. The ſailing ſquirrel has nothing to do on the water. He inhabits *Java*, and others of the *Indian* iſlands, leaps from tree to tree, as if he flew, and will catch hold of the boughs with his tail. They vary in ſize; ſome are of the ſize of a common ſquirrel; others as large as a hare. The uſual length, from the noſe to the tail, is eighteen inches; the tail fifteen. The colour of the head, body and tail, is a bright bay; in ſome parts inclining to orange: the breaſt and belly are of a yellowiſh white. Its head is ſmall and rounded; its upper lip cloven; its ears ſmall and blunt. It has two ſmall warts at the outmoſt corner of each eye, with hairs growing out of them. Its neck is ſhort. It has four toes on the fore-feet; and, inſtead of a thumb, a ſlender bone, two inches and a half long, lodged under the lateral membrane, and ſerving to ſtretch it out; from thence to the hind-legs, extends the membrane, which is a continuation of the ſkin of the ſides and belly, and extends along the fore-legs, and ſtretches out near the joint in a winged form. This ſpecies has five toes on the hind feet; and, on all the toes, ſharp, compreſſed, bent claws. Its tail is covered with long hairs, diſpoſed horizontally. *Nieuhoff* deſcribes this creature under the name of the *flying cat*.

* Sciurus Sagitta of the Syſt. Nat.

XVII. XVIII.—*The Severn River, and the Flying Squirrel.*

THE former of theſe is found about the *Severn River* in the ſouthren parts of *Hudſon's Bay*. In the philoſophical tranſactions, it is called the *greater flying Squirrel*. Its back and ſides are of a deep aſh colour at bottom, ferruginous on the ſurface. The under ſide of the body is of a yellowiſh white. Its hair is every where long and full. The inſtrument of flying is diſpoſed from leg to leg; but does not border the fore-legs.

The *flying ſquirrel* is much leſs than the common ſquirrrel. Its colour above is a browniſh aſh; beneath, white, tinged with yellow. It has round naked ears; full black eyes; a lateral membrane from the fore to the hind legs; but the fore legs are for the moſt part clear of the membrane. The hair on its tail is long, diſpoſed horizontally, longeſt in the middle, and ending in a point. It inhabits *North America* and *New Spain*; and, in ſome meaſure, reſembles the owl, as it lives in hollow trees, ſleeps during the day, and is very lively in the night. Numbers of them are found in one tree. They leap from bough to bough, ſometimes to the diſtance of ten yards. This action is improperly called flying; for the animal can move in no other direction than forward, and even ſinks conſiderably during its leap. Senſible of this, it mounts in proportion to the diſtance it wiſhes to reach. When numbers of them leap at a time, they ſeem like leaves blown off by the wind. Their food is the ſame with the other *American* ſquirrels. They are eaſily tamed; and bring three or four at a time.

XIX. XX.—*The Hooded, and the European Flying Squirrel.*

The hooded ſquirrel, according to *Seba*, who is the only author that has deſcribed it, inhabits *Virginia*. Its lateral membrane begins at the chin and ears, and extends from the fore to the hind leg. It is reddiſh above, cinereous, tinged with yellow beneath. Its ears are large and oval.

The *European* flying ſquirrel inhabits *Finland* and *Lapland*, and the *Ruſſian* dominions, to the north-eaſt parts of *Siberia*, and is common in all the mountainous tracts of that cold region. It lives uſually on birch tree buds, and fructifications, and on the cones of the pines and cedars. It leads a ſolitary life, and wanders about even in winter. It lives in hollow trees, and makes its neſt of moſs. When at reſt, it flings its tail over its back; but in leaping, it extends it. The *Germans* call it the *king* of the ſquirrels. Its ears are naked, indented on the exterior ſide: its eyes are full: its eye-lids are bordered with black: its membranes extend to the very baſe of its fore-feet, and form a large wing on the exterior ſide: its tail is full of hair, buſhy and round at the end. The colour of the upper part of the body is a fine grey, like that of a gull's back. The lower parts are of a pure white. Its body meaſures only four inches and a quarter; its tail five.

Plate XLI



1. GREAT FLYING SQUIRREL 2 & 3. FLYING SQUIRRELS

Plate XLII.



1. GROUND SQUIRREL 2. FAT SQUIRREL 3.DORE MOUSE
4. GARDEN SQUIRREL 5.GERBOA

GENUS XXIX.—*The Dormouſe.*

THIS genus conſiſts of ſmall quadrupeds, and contains only five ſpecies. Its marks are, two cutting teeth in each jaw; four toes before, and five behind; naked ears, and a long tail covered with hair.

I.—*The Striped Dormouſe* *.

THE ſtriped dormouſe has plain ears, and full eyes: the ridge of its back is marked with a black ſtripe, and each ſide with one of a pale yellow, bounded above and below with a line of black. Its head, body and tail, are of a reddiſh brown; the tail darkeſt: its breaſt and belly are white: its noſe and feet are of a pale red. It inhabits the north of *Aſia*; but is found in great abundance in the foreſts of *North America*. It never runs up trees, except when purſued, and unable otherwiſe to eſcape. It burrows, and forms its habitations with two entrances, that it may have acceſs by one, if the other ſhould be ſtopped up. Their retreats are formed with great ſkill, in form of a gallery, with branches on each ſide, each of which terminates in an enlarged chamber, as a magazine to ſtore their winter proviſion in: in one they lodge acorns; in another maize; in a third hickery nuts; and in the laſt, their favourite food, the *chinquapin* cheſ-

* The Sciurus Glis of the Syſt. Nat.

nut. During harveſt, they are very buſy in procuring proviſions. They have pouches in their jaws like the *Hamſter*. They give great preference to certain food for if, after filling their mouths with rye, they meet with wheat, they fling away the firſt, that they may indulge in the laſt. They are very wild, bite fiercely, and are ſcarcely ever to be tamed. Their ſkins are of little uſe; but are ſometimes brought over to line cloaks.

II.—*The Fat Dormouſe* †.

THE fat dormouſe, with thin naked ears, is near ſix inches long: its tail four and a half: its body is thicker than that of the ſquirrel, and is covered with ſoft aſh coloured hair: its belly is whitiſh; and its tail is full of long hair. It inhabits *France* and the ſouth of *Europe*, and the ſouth-weſt parts of *Aſſiatic Ruſſia*. It lives on trees; leaps from bough to bough; feeds on fruits and acorns; lodges in hollow trees; and remains in a torpid ſtate during winter, at which time it is very fat.

> Tota mihi dormitur hyems, et pinguior illo
> Tempore ſum, quo me nil niſi ſomnus alit.
>
> MARTIAL, Lib. xiii. Ep. 59.

They were eſteemed a great delicacy by the *Romans* who had their *gliraria*, places conſtructed to feed them in.

† Le Loir of Buffon.

III.—*The Garden Dormouſe* *.

THIS ſpecies has its eyes ſurrounded with a large ſpot of black, reaching to the baſe of the ears. It has alſo another black ſpot behind its ears. Its head and body are of a tawny colour: its throat, and the whole under ſide of its body, is white, tinged with yellow: its tail is long, with ſhort hair at the baſe, but buſhy at the end. It is about five inches long; its tail four. It inhabits *France* and the ſouth of *Europe*. It is found in magpies neſts, and hollow trees about the *Wolga*; but neither this nor the former ſpecies extends beyond the *Uralian* mountains. It infeſts gardens, and is very deſtructive to fruits of all kinds. It is particularly fond of peaches; lodges in the holes of walls; brings five or ſix young at a time; and, like the former, remains torpid during the winter. It has a ſtrong ſmell like a rat.

IV.—*The common Dormouſe* †.

THE common dormouſe is of the ſize of a mouſe; but is ſomewhat plumper. It has round naked ears, and full black eyes. Its body is of a tawny red: its throat white: its tail is two inches and a half long; and is pretty hairy, eſpecially towards the end. It inhabits

* Mus Quercinus of the Syſt. Nat. Le Leot of Buffon.

† Mus Avellanarius of the Syſt. Nat. Le Muſcardin.

Europe; lives in thick hedges; and makes its neſt in the hollow of a tree, or in the bottom of a thick buſh, of graſs, moſs, or dead leaves. It ſeldom appears far from its retreat; forms magazines of nuts; and eats ſitting up like a ſquirrel. The female brings three or four young at a time. At the approach of winter, it retires, rolls itſelf up, and lies torpid. Sometimes it revives in a warm day, takes a little food, and relapſes into its former ſtate.

Thus to its moſſy couch the dormouſe ſprings;
And ſleep protects it with his eider wings.

V.—*The Earleſs Dormouſe*

THE earleſs dormouſe is ſo called, not becauſe it is abſolutely without ears, but becauſe its ears are ſo very minute as to ſcarcely appear. Its head is flat; its noſe obtuſe; its eyes full and black: its upper lip is bifid; and its whiſkers are long: its upper parts, and its fore-legs, are of a pale ferruginous colour, except that from the ſhoulder to the hind parts, it has a white line along each ſide, and another above each eye. Its belly and feet are of a dirty white: its tail is black in the middle, and hoary on the ſides: its toes are long and diſtinct, with very long claws. There is a large knob on the fore-feet. The hind legs are black behind, and naked.

It is a creature of the ſize of a common ſquirrel; but much broader and flatter. It inhabits the mountains, about

about 800 miles above the *Cape of Good Hope*. It never climbs trees; it burrows; feeds on bulbous roots; and is particularly fond of potatoes. It often walks on its hind-feet; and often lies flat on its belly; is very tame, and never offers to bite. It frequently flirts up with its tail. It makes a warm neſt; and forms a round hole in it, in which it lodges. It ſometimes keeps cloſe in this retreat for three entire days together.

GENUS XXXII.—*The Jerboa.*

OF this genus there are only four ſpecies, with ſome varieties. Its diſtinctive characters are, two cutting teeth in each jaw; two very ſhort fore-legs; two very long hind-legs, reſembling thoſe of cloven footed water-fowl; and a very long tail, tufted at the end.

I.—*The Egyptian Jerboa* *.

THIS ſpecies, notwithſtanding its name, is not confined to *Egypt*, but inhabits *Barbary*, *Paleſtine*, the deſerts between *Balſora* and *Aleppo*, and the ſandy tracts between the *Don* and *Wolga*. It is a ſingular animal, both in its form and motions. Its ears are thin, erect, and broad; its eyes full and dark; its whiſkers long: its fore-legs are one inch long; its hind ones two and a quarter. On each of the fore-feet, there are five toes; the inner one, or thumb, is ſcarce apparent; but that, as well as the reſt, is furniſhed with a ſharp claw. The hind legs are long, thin, covered with ſhort hair, and exactly reſembling thoſe of a bird. There are three long toes on each, covered above and below with hair: the middle one longeſt. There is on each a pretty long ſharp claw.

Its

* Mus Bipes of Pliny. Mus Jaculus of the Syſt. Nat. Le Jerbo de Buffon.

Its length, from noſe to tail, is ſeven inches and a quarter: its tail is ten inches long, covered with very ſhort coarſe hair; but terminated with a thick black tuft, tipped with white. The upper part of the body is thin, as if compreſſed ſideways; that about the rump and loins is large. It is covered with long hair, aſh-coloured at the bottom, and pale tawny at the ends. Its breaſt and belly are whitiſh. Acroſs the upper part of the thighs there is an obſcure duſky band, with long ſoft hair.

It ſtands on its hind-feet. The fore-feet perform the office of hands. It runs faſt; and, when purſued, jumps five or ſix feet from the ground. It burrows like a rabbit; keeps cloſe during the day, and ſleeps rolled up. It is lively during the night. When taken, it emits a plaintive feeble note. It feeds on vegetables; and has great ſtrength in its fore-feet. The *Arabs* call it *Daman Iſrael*, or the *Lamb* of the *Iſraelites*. It is ſuppoſed to be the *coney* of Holy Writ. It is alſo the *mouſe* of *Iſaiah*, chap. lxvi. 17. It was forbidden food to the *Iſraelites*. Dr. *Shaw* met with it on mount *Libanus*, and diſtinguiſhed it from the following ſpecies.

II—*The Siberian Jerboa.*

Of the *Siberian* jerboa there are three varieties, the greater, the middle, and the pigmy.

The greater *Siberian* jerboa has a truncated noſe, edged with white. Its lower teeth are ſlender, and twice as long as the upper: its ears are large and pointed, tipt with white, and naked within: its hair is very ſoft, tawny

tawny on the back, and lower of a dark grey: its legs, and the under ſide of its body, are white. The half of the tail next the body is covered with ſhort whitiſh hairs; the other half with long black hairs, and terminated with a white feather tuft, an inch long. On the hind-legs, an inch above the feet, are two long toes, armed with nails: the back part of each leg is naked. The length of the body is eight inches and a half; of the tail ten. It is found from the *Caſpian Sea* to the river *Irtiſh*: it is of the ſize of a rat: it is of the colour of the former, except that the rump, on each ſide, is croſſed with a white line.

The *middle variety* has its noſe more lengthened, and its ears ſhorter and broader: its tail is thicker, and not ſo elegantly tufted: its hind legs are ſhorter; and its coat is longer and thicker. It is found beyond lake *Baikal*, alſo in *Barbary* and *Syria*, and even as far as *India*.

The *pigmy* differs from the *greater*, in wanting the white circle round the noſe; in having a leſs tuft to the tail; and the end juſt tipt with white. It agrees entirely in form, but is far inferior in ſize to even the *middle* variety. It inhabits the ſame countries with the *greater*.

The three agree in manners. They all burrow in hard ground, clay, or indurated mud. They dig their holes very ſpeedily with their fore-feet and teeth, and fling the earth back with their hind-feet, ſo as to form a heap at the entrance. Their burrows are continued many yards in length, winding obliquely, but dip not above a foot and a half below the ſurface. They have but one entrance, but uſually work in another direction,

an

an outlet within a very little of the ſurface, through which they can inſtantly make their eſcape, in caſe of neceſſity. It keeps within its hole all day, and wanders only in the night: they ſleep rolled up, with their head between their thighs.

At ſunſet they come out of their holes, and keep abroad till the ſun has drawn up the dews. On the approach of any danger, they immediately take to flight, with vaſt leaps, a fathom in height, and ſo ſwiftly, that a horſeman well mounted can hardly overtake them. They ſpring ſo nimbly, that it is impoſſible to ſee their feet touch the ground. In leaping, they carry their tails ſtretched out. In ſtanding, walking, or going, they carry them in the form of an S, the lower part touching the ground. The reader will perhaps be diſpoſed to think, that they reſemble the kangaroo in their attitudes and motions. When ſurpriſed, they will go on all fours; but ſoon recover their attitude of ſtanding on their hind-legs like a bird. Even when undiſturbed, they riſe erect, liſten, and hop about like a magpie. In digging, or eating, they drop on their fore-legs; but they often alſo ſit up, and eat like a ſquirrel. They are eaſily tamed, and readily foretell cold or bad weather, by wrapping themſelves cloſely up in hay. In a wild ſtate, they are particularly fond of the roots of tulips. When confined, they will not refuſe raw meat, and the entrails of fowls. They are the prey of all leſſer rapacious beaſts. The *Arabs*, who are forbidden all other kinds of mice, eſteem theſe the greateſt delicacies. The *Mongals* have a notion that they ſuck the ſheep; certain it is, that, during the night, they are very frequent among the flocks. They breed in the ſummer, and bring perhaps eight at a time, as they have ſo many teats. They ſleep the

whole winter without nutriment. The figure of theſe animals, with that of the plant *ſilphium*, were uſed to denote the country of *Cyrene*.

III.—*The Cape Jerboa.*

THE *Cape* jerboa has a ſhort head, broad between the ears: its mouth is placed far below the upper jaw; the lower is very ſhort. It has two great teeth in each. Its ears are thin and tranſparent, and one-third ſhorter than thoſe of the common rabbit. It has alſo great whiſkers, and large eyes. Its fore-legs are ſhort; it has five toes on each, with a great protuberance next to the inner toe. The claws of the fore-toes are crooked, and two-thirds longer than the toes themſelves. It has four toes behind, with ſhort claws. Its colour is tawny above; cinereous below, mixed with long hairs pointed with black. Two-thirds of the tail is tawny, the reſt black. The length of the body fourteen, of the tail fifteen, of the ears near three inches. It inhabits the great mountains, far north of the *Cape* of *Good Hope*; and is called by the *Dutch*, the *jumping hare*. It is very ſtrong, and will leap twenty or thirty feet at a time. It emits a grunting ſound; ſits upright when it eats, with its legs extended horizontally, and its back bent. It uſes its fore-feet to bring its food to its mouth; and burrows with them moſt expeditiouſly. In ſleeping, it ſits with its knees ſeparate, and puts its head between its hind legs, and, with its fore-legs, holds its ears over its eyes.

IV.—*The Torrid Jerboa* *.

THE torrid jerboa has naked oval ears; long whiſkers: four toes on the fore-feet; the hind-feet are as long as the body, thick and ſtrong, but thinly haired. It has five toes on each foot; ſcarcely any neck. The tail is alſo the length of the body, with very little hair upon it. The colour of the upper part of the body is yellow; of the lower white. It is of the ſize of a common mouſe. It inhabits the *Torrid Zone*.

* Mus Longipes of the Syſt. Nat.

GENUS XXXIII.—*The Rat.*

THIS genus contains no fewer than forty ſpecies, divided into different claſſes. It has two cutting teeth in each jaw; four toes before; five behind; a very ſlender taper tail, naked, or very ſlightly haired.

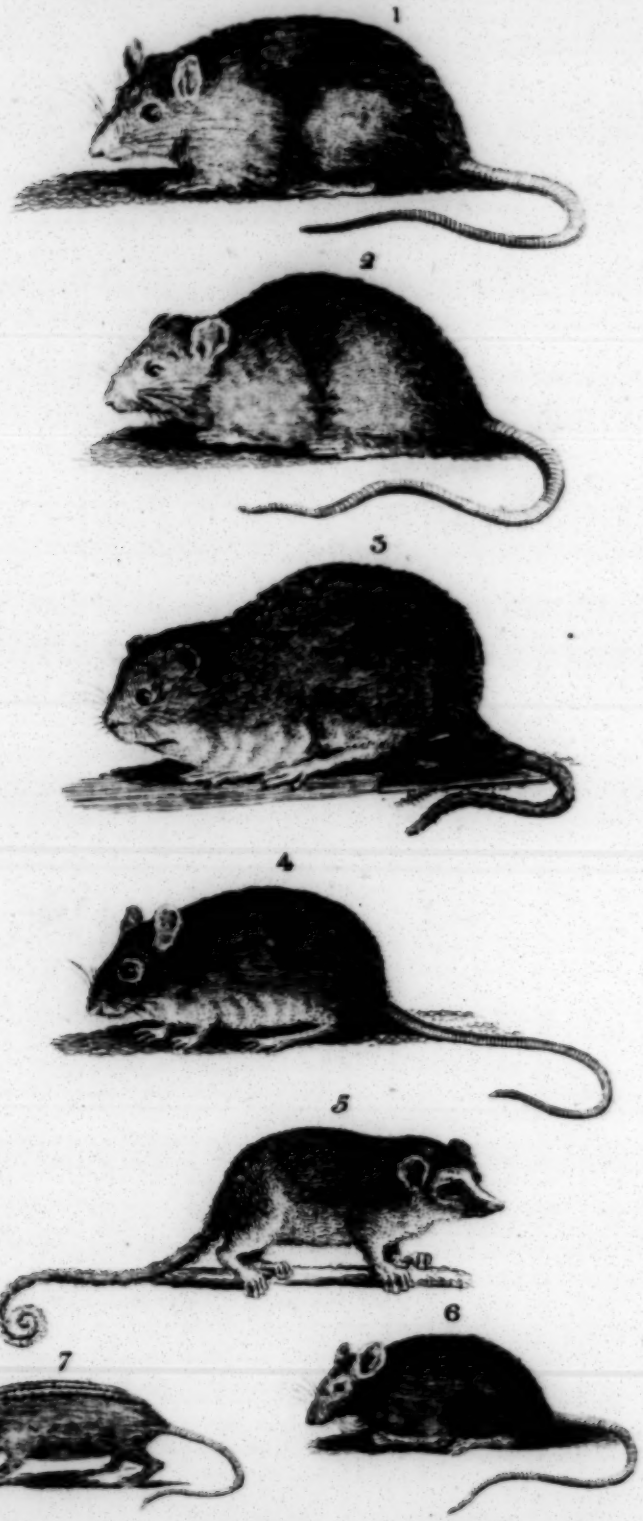
The firſt claſs may be diſtinguiſhed by the name of *Jerboid* rats, on account of the length of their hind-legs: the ſecond by the name of *murine*, as comprehending all the common ſpecies of rats and *mice*.

I. & II.—*The Labrador Rat, and Circaſſian Marmot.*

THIS ſpecies has a blunt noſe. Its mouth is placed far beneath: its upper lip is bifid; its ears are large, naked, and rounded: its fore-legs are ſhort, furniſhed with four toes, and a tubercle inſtead of a thumb: its hind-legs are long and naked, like ſome of the jerboas, with a ſhort thumb, and toes long, ſlender, and diſtinct, of which the exterior is the ſhorteſt.

The whole length of the animal is eight inches; of its tail, four and three quarters. Its colour is deep brown above, white beneath: theſe are ſeparated, the whole length on each ſide, by a yellow line. It inhabits *Hudſon's Bay*, and the *Labrador* coaſt. It is alſo found near the *Caſpian Sea*, lat. 46°. 30', N. where ſcarce any thing

1. RAT 2. BROWN RAT 3. WATER RAT Pl.XLIII.
4. LONG TAILD FIELD MOUSE



5. MADAGASCAR RAT 6. MOUSE 7. DWARF MOUSE

thing grows, except *Torlok* and a few other poor plants, on which it feeds. Their burrows have three entrances, are about a yard deep, lined or plaiſtered with mud, but without either neſt or proviſion. This *Aſiatic* animal differs a little in colour from the *American*, being of a light grey above, mixed with tawny, and white below; and having theſe colours divided lengthways by a ſtripe of duſky red. Dr. Pallas ſuppoſes it to be the ſame with the *jird* of Dr. Shaw. It is frequent in Barbary, and is there reckoned good food. What has been called

The *Circaſſian* marmot, has ears like thoſe of mice, red ſparkling eyes, ſharp teeth, a body long and of equal thickneſs, cheſnut coloured hair, long, eſpecially on the back, ſharp claws, and a long and buſhy tail. Its fore-feet are ſhorter than thoſe behind: it is of the ſize of a *hamſter*, No. 29. It inhabits the banks of the river *Terek*, which flows out of *Circaſſia*, and falls into the *Caſpian* ſea. It runs faſt up hill, but very ſlowly down, burrows and lives under ground.

III.—*The Tamariſk Rat.*

THE tamariſk rat has an oblong head, great whiſkers, and a blunt noſe. His noſtrils are covered with a flap: his teeth are yellow: his eyes are large and brown: his ears are large, naked, and oval. There is a white ſpace round the noſe and eyes, and beyond the ears. The ſides of his head and neck are hoary: his neck is ſhort: his back and ſides are of a yellowiſh grey, tipped with brown: his breaſt and belly are white: his tail is aſh-coloured, annulated with brown: his hind legs are long: the fore feet have á tubercle like a wart, inſtead of a thumb: his length

length is above ſix inches; his tail is not quite ſo long. This ſpecies inhabits the ſalt marſhes about the river *Ural*, and burrows beneath the knotty roots of the tamariſk buſhes. Each burrow has two entrances, and is very deep. They feed only at night. Their food conſiſts of maritime ſucculent plants.

We come now to the claſs of *Murine* Rats.

IV.—*The Black Rat* *.

THIS ſpecies is of a deep iron grey colour, nearly black. Its belly is cinereous; its legs duſky, almoſt naked. It has a claw in the place of a fifth toe on the fore feet. Its body meaſures ſeven inches; its tail near eight. It inhabits moſt parts of *Europe*. Its numbers are much leſſened, and in many places indeed extirpated, by the following ſpecies. They are very deſtructive to corn, furniture, young poultry, rabbits and pigeons. They will even gnaw the extremities of infants when aſleep. They breed often in a year, and bring ſix or ſeven young at a time. They make their neſt in a hole, often near a chimney, with wool, bits of cloth, or with ſtraw. They will deſtroy and devour one another; but their greateſt enemy is the weaſel. They were carried into *South America* about the year 1544, by the *Europeans*, and are now become the peſt of all that continent. The word *Rattus*, or *Rat*, is modern. The *Romans* probably comprehended all kinds under the word *Mus*. The *Welſh* call it *the French Mouſe*, which intimates that it has been imported thence into our iſland. None of them are found in *Siberia*. They ſwarm at *Otaheite*, and others of the *Society*

* Mus Rattus of the Syſt. Nat. Le Rat de Buffon.

ciety Iſlands, and are met with in *New Zealand* and *New Holland*. In *Otaheite* they are ſo bold as to attack the inhabitants when aſleep, who hold them in the utmoſt deteſtation, and will not even kill them, leſt they ſhould be polluted by the touch. They will not even eat the bread-fruit theſe animals ſhould happen to run over.

V.—*The Brown Rat.*

THE brown rat is larger and ſtronger than the black. Its head, back, and ſides, are of a light brown colour, mixed with tawny and aſh-colour: its breaſt and belly of a dirty white: its feet are naked and of a dirty fleſh colour: its fore feet are furniſhed with four toes, and a claw inſtead of a fifth. The length of its body is nine inches, of its tail the ſame. It weighs about eleven ounces. It inhabits moſt parts of *Europe*; but was a ſtranger to that continent till the preſent century. It came into *Britain* about ſixty years ago. It has not been known in the neighbourhood of *Paris* above half that time. It is probable they were imported from the *Eaſt Indies*, where they burrow, and undermine the foundations of houſes ſo as to make them fall. They ſwarm in *Peterſburgh*, and have reached *Pruſſia*. They ſometimes migrate in vaſt armies, and do infinite miſchief. They burrow like the water rat, on the ſides of ponds and ditches, ſwim well, and dive readily. They live on grain and fruits, and will deſtroy poultry and game. They breed prodigiouſly faſt, as they bring from fourteen to eighteen young at a time. They are very bold and fierce. When cloſely purſued, they will turn and faſten on the hand or ſtick that offers to ſtrike them.

VI. & VII.—*The American Rat, and Water Rat.*

THE former ſpecies is larger than the black, but leſs than the brown rat. Its upper jaw is much longer than the lower: its head is long: its noſe narrow and pointed: its ears large and naked: its whiſkers are fine, but long: its tail is naked, and like that of the black rat, but not ſo long: its colour is a deep brown, inclining on the belly to aſh. It inhabits *North America*. The *Mus Caraco* of Dr. *Pallas* is nearly allied to this ſpecies. It burrows in the banks of rivers, and is ſuppoſed to extend from the lake *Baikal* to *China*, where it is very noxious.

The Water Rat, the *Mus Amphibius* of *Linnæus*, has a thick blunt noſe; ears hid in its fur; ſmall eyes, and yellow teeth: it has five toes on each foot; the inner toe of the fore foot very ſmall, and the firſt joint very flexible: its head and body are covered with long hair, black mixed with ferruginous: its belly is of an iron grey: its tail is covered with ſhort black hair: its lip is whitiſh: its body meaſures ſeven inches; its tail five: it bears ſome reſemblance to the beaver: the ſhape of its head and body is more compact than that of the former ſpecies. It inhabits *Europe*, the north of *Aſia*, and *North America*. Thoſe of *Canada* vary to tawny and white. It burrows in the banks of rivers, ponds and ditches; feeds on ſmall fiſh and fry, frogs, inſects and roots. It ſwims and dives admirably; but while it preys on ſo many other fiſhes, it becomes itſelf the prey of the pike. It brings ſix young at a time. This animal, and the otter, are eaten in *France* on meager days.

VIII. IX. & X. *The Mouſe, the Field Mouſe, and the Harveſt Mouſe.*

THE mouſe is an animal that needs no deſcription. When found white, it is very beautiful; and its full bright eye appears to great advantage amidſt its ſnowy fur. The mouſe follows mankind, and inhabits all parts of the world, except the *Arctic*.

The *field mouſe* has full black eyes: its head, back, and ſides, are of a yellowiſh brown mixed with duſky hairs: its breaſt is of an ochre colour, and its belly white: its body is four inches and a half long: its tail is ſlightly covered with hair, and meaſures four. It inhabits *Europe*, and is found only in fields and gardens. It feeds on nuts, acorns, and corn, and forms great magazines of proviſions for winter. It makes a neſt for its young very near the ſurface; and often in a thick tuft of graſs. It brings from ſeven to ten young ones at a time. In ſome parts of *England*, it is called the *bean mouſe*, from the havock it makes among beans when juſt ſown. It is common in *Ruſſia* about the *Uralian Chain*, but not beyond.

There is an *American* variety of it, ſome white, others black, with large, naked, and open ears, and a broad dark ſtripe along the back. Their cheeks and ſides are orange coloured: the under ſide of their tails is of a ſnowy whiteneſs. Their feet are white; and their hind-legs are longer than thoſe of the *European* kind.

The harveſt mouſe. Its eyes are leſs prominent than thoſe of the former ſpecies. It has prominent ears; and is of a full ferruginous colour above; white beneath;

with a ſtraight line along the ſides, dividing the colours. It is two inches and a half long; its tail meaſures two inches. The whole animal weighs only one-ſixth of an ounce.

In *Hampſhire*, they appear in great numbers during the harveſt, but never enter the houſes. They are often carried into the ricks of corn in the ſheaves; and are often killed in hundreds at the breaking up of the ricks. During winter they ſhelter themſelves under ground, and burrow very deep, where they form a warm bed of dead graſs. They form their neſts alſo above ground among ſtanding corn; and bring about eight young at a time.

XI. XII. XIII. & XIV.—*The Oriental Mouſe, &c.*

THE oriental is about half the ſize of the common mouſe. It is of a grey colour, and has rounded ears. Its back and ſides are elegantly marked with twelve rows of ſmall pearl coloured ſpots, extending from the head to the rump. Its tail is as long as its body. It inhabits *India*. In the ſame country, and in *Guinea*, there is another ſmall ſpecies which ſmells of muſk. The *Portugueſe* living in *India*, call it *cheroſo*, and ſay its bite is venemous.

The *Barbary mouſe* is alſo leſs than the common one; of a brown colour; marked on the back with ten ſlender ſtreaks. It has three toes, with claws on the fore-feet, and the rudiments of a thumb. Its tail is of the ſame length with the body.

The

The *Mexican mouſe* is of a whitiſh colour, mixed with red. Its head is whitiſh: each ſide of its belly is marked with a great reddiſh ſpot.

The *Virginian mouſe* has pointed ears; a black pointed noſe; and long whiſkers. Its fur is very ſhort: its limbs are very ſlender: its tail very thick at the baſe, and all beſet with long hair; tapers gradually to a point; and is very long and ſlender. The colour of this animal is univerſally white. The thickneſs at the baſe of its tail is its ſpecific difference.

XV.—*The Wandering Mouſe.*

THIS ſpecies has an oblong head, a blunt noſe, with a red tip, and yellow cutting teeth. Its eyes are placed midway between the noſe and ears: its ears are large, oval, and naked; but duſky and downy at the tips: its limbs are ſlender: its tail is longer than the body, and very ſlender alſo; its colour above is pale aſh, mixed and waved with black; with a black line along the back. The ends of its limbs are whitiſh. Its body and tail are each about three inches long. It inhabits the whole *Tartarian* deſert. At certain times, they wander about in great flocks, migrating from place to place during the night. They are obſerved in birch woods as high as 57° North. They are of a very chilly nature, ſoon become torpid, and ſleep rolled up in a cold night, even in the month of June. They live in holes and fiſſures of rocks. The *Tartars* call it the *gregarious mouſe*.

XVI. XVII. & XVIII.—*The Birch, the Ruſtic, and the Little Mouſe.*

THE *birch* is ſtill leſs than the *wandering* mouſe. Like it, it is very tender, and ſoon grows torpid in cold weather. It inhabits the ſame countries, runs up trees, and faſtens to the boughs with its tail. By the aſſiſtance of its ſlender fingers, it adheres to any ſmooth ſurface. It emits a weak note. It has a ſharp noſe, red at the the point, like that of the former; but ſmaller ears, brown and briſtly at the points. Its tail is very ſlender, and much longer than its body; brown above, and white below. It has a duſky line alſo along the back.

The *ruſtic* mouſe has a ſharp noſe, an oblong head, ſmall ears lined with fur. Its colour is ferruginous above, whitiſh beneath. Above each hind-foot, it has a duſky circle. It is of a leſs ſize than the *field mouſe*. Its tail is only half the length of its body. It is found in the temperate parts of *Ruſſia*; in villages and corn fields, and in the woods of *Siberia*. In *Ruſſia*, it is called the corn mouſe. At times they migrate in vaſt multitudes, and deſtroy the whole expectations of the farmer. In 1763 and 1764, this plague made great ravages in the rich country about *Caſan* and *Arſk*. They came in ſuch numbers, as to fill the very houſes; and, through hunger, became ſo bold as to rob the tables of bread, before the faces of thoſe who had ſat down to eat it. At the approach of winter, they all diſappeared.

They burrow, and form their retreats but little below the ſurface.

The

The *little mouſe*, the leaſt of the genus, weighs not half a dram. It accompanies the former ſpecies in corn fields, barns, and birch woods. It is ſaid there are more males than females of this ſpecies, and that they ſeem to wander without having any certain places for their neſts. They have ſharpiſh noſes, and ſmall ears, half hid in their fur, and are of a deep tawny colour above, white below, with grey feet. We come now to another claſs,

Rats with tails of a middle length.

XIX. & XX.—*The Rock, and the Oeconomic Mouſe.*

THE rock mouſe is about four inches long; its tail one and a half, having a few hairs ſcattered over it. Its head is oblong: its noſe rather pointed: its ears riſe above the fur; and are oval and downy, with brown edges: its whiſkers are ſhort: its limbs are ſtrong: its colour is brown, ſlightly mixed with grey above: its belly is of a light aſh: its ſnout duſky, with a very ſlender ring of white.

The *œconomic mouſe* has ſmall eyes: naked ears, hid in its fur; ſtrong limbs; and very tawny teeth. Its colour is black and yellow intimately mixed. It has a dark down beneath the hair; the ends of its feet are duſky. It is about four inches and a quarter long: its tail is rather more than an inch. In the form of its body, it reſembles the meadow mouſe; but is rather longer, and has a bigger belly.

It

It inhabits all *Siberia*, eſpecially its eaſtern parts, and *Kamſchatka*, in great numbers. It is even found within the *Arctic* circle.

Dr. *Pallas* gave them the name of œconomic mice from their curious way of living. They inhabit damp ſoils, and ſhun the ſandy, and form burrows with many chambers and entrances. In their chambers they lay up ſtore of proviſions, collected with great pains in ſummer from various plants, which they bring out of their holes in a ſunny day that they may dry them more effectually. During ſummer they never break upon their hoards, but live on berries, and other vegetable productions. In certain years, they make great migrations out of *Kamſchatka*. They collect in the ſpring, and go off in incredible multitudes. Like the *lemmus*, they go on in a direct courſe, and neither rivers nor arms of the ſea ſtop their progreſs. In their paſſage through the watry element, numbers of them fall a prey to ravenous fiſhes. But on land they are ſafe, for the people of *Kamſchatka* have a ſuperſtitious veneration for them, and are ſo far from hurting them, that if they find any of them lying faint from fatigue or hunger, they give them all poſſible aſſiſtance. On their return from a migration, expreſſes are ſent to all parts with the glad news. When the natives rob them, they never take away all their ſtore, but leave them ſomething to ſubſiſt on.

XXI. XXII. & XXIII.—*The Red, the Garlic, and the Soricene Mouſe.*

THE *Red Mouſe* is about four inches long: its tail above one, and full of hair: its noſe and face are very briſtly: its back is of an uniform, pleaſant, tawny red: its ſides are light grey and yellow. The under ſide of the body is whitiſh: its feet are alſo white. It inhabits *Siberia* from the *Oby* eaſtward to *Kamſchatka*, in woods and mountains. It is alſo found within the *Arctic* circle. They wander out the whole winter, and are very lively even amidſt the ſnows. They eat any thing that comes in their way.

The *Garlic Mouſe* is frequent in magazines of bulbous roots formed by the peaſants of *Siberia*, eſpecially in thoſe of angular garlic. It has great open naked ears: its tail is clothed with hair. The colour of its back is cinereous, mixed with long hairs, tipped with a duſky grey: its ſides are of a light aſh: its breaſt, belly, and feet, are white: its body is four inches: its tail one and a half.

The *Soricene Mouſe*, found in the neighbourhood of *Straſbourg*, is of a yellowiſh grey on the upper parts of the body, with a white belly. Its noſe is a little extended: it has four toes before, five behind, round ears, a tail of a middling length, and covered with hair. We come now to a fourth claſs.

Rats with ſhort Tails.

XXIV.—*The Lemmus.*

THE Lemmus, or Leming, has two very long cutting teeth in each jaw, a pointed head, and long whiſkers. Its eyes are ſmall and black: its mouth is ſmall: its upper lip divided; its ears are ſmall and blunt, reclining backwards: its fore-legs are very ſhort, with four ſlender toes on each, covered with hair; and in place of a thumb, it has a ſhort claw, like a cock's ſpur: it has five toes behind: its ſkin is very thin: its head and body are black and tawny, diſpoſed in irregular blotches: its belly is white, tinged with yellow: its length is about five inches: its tail one and a half. Thoſe of *Ruſſian Lapland* are much leſs than thoſe of the *Norwegian* or *Swediſh*. They appear in numberleſs troops, at very uncertain periods, in *Norway* and *Lapland*, and are at once the peſt and wonder of the country. They march like the army of locuſts, ſo emphatically deſcribed by the prophet *Joel*, deſtroy every root of graſs before them, and ſpread univerſal deſolation. They infect the very ground; and cattle are ſaid to periſh which taſte the graſs they have touched. They march by myriads in regular lines. Nothing ſtops their progreſs; neither moraſs nor lake, water nor fire: the greateſt rock is but a ſlight obſtacle; they wind round it, and then go on ſtraight. If they meet a peaſant, they jump as high as his knees in defence of their progreſs. They are ſo fierce, that they will lay hold of a ſtick, and ſuffer themſelves to be ſwung about before they quit their hold: if ſtruck, they turn and bite, and make a noiſe like a dog.

The

They feed on graſs, on the rein-deer liverwort, and the calkins of the dwarf birch. The firſt they get under the ſnow, beneath which they wander during winter. Where they make their lodgements, they have a ſpiracle to the ſurface for the ſake of air. In theſe retreats they are eagerly purſued by the *Arctic* foxes.

They make alſo very ſhallow burrows under the turf; but do not form any magazines for winter proviſion: by this improvidence, it ſeems they are compelled to migrate, urged by hunger to quit their uſual reſidence.

They breed often in the year, and bring five or ſix young at a time. Sometimes they bring forth on their march, during a migration: ſome they carry in their mouths, and others on their backs. They are not poiſonous. The *Laplanders* often eat them, and compare their fleſh to that of ſquirrels.

They are the prey of foxes, lynxes and ermines, who follow them in great numbers. They periſh at length, either from want of food, or from their deſtroying each other, or in ſome great water, or in the ſea. In former times, the prieſts exorciſed them in a long ſet form of prayer. They migrate once or twice in twenty years, like a vaſt colony of emigrants from a country overſtocked; a diſcharge of animals from the great northern hive, that once poured out its myriads of human creatures upon ſouthern *Europe*. Where the head quarters of theſe quadrupeds are, is not certainly known: it was once ſeriouſly believed, that they were generated in the clouds, and that they fell in ſhowers upon the earth; but wherever they come from, none return: their courſe is predeſtinate, and they purſue their fate.

XXV. & XXVI.—*The Ringed, and the Hudſon's Bay Rat.*

THE *ringed rat* has a blunt noſe; ears hid in its fur; legs ſtrong and ſhort; ſoles covered with hair; claws very ſtrong, and hooked at the end, and very fine hair all over the body; of a ferruginous colour, mixed with yellow; ſometimes pale grey, clouded, or waved with a duſky ruſt colour. From the ears, down each ſide of the head, there is a duſky ſpace; and behind that, a ſtripe of white, ſo that the neck appears to be encircled with a collar; behind which there is another duſky one. The body is three inches long; the tail one. At its end there is a tuſt of hard briſtles. It inhabits the northren parts abont the *Oby*; burrows with many paſſages beneath the turfy ſoil; and lines its neſt with rein-deer and ſnow liver-wort. They are ſaid to migrate at the ſame ſeaſons with the lemmus.

The *Hudſon's Bay* rat has ſlender brown whiſkers; very fine long ſoft hair; aſh, tinged with tawny, on the back, with a duſky ſtripe running along its middle; and along each ſide a pale tawny line. Its belly is of a pale aſh colour: its limbs are very ſhort; its fore-feet very ſtrong. The two middle claws of the male are very ſtrong, thick; and compreſſed at the end. Its tail is very ſhort, terminated by ſome ſtiff briſtles. The body is about five inches long. It inhabits *Labrador*.

XXVII.—*The Hare-tailed Rat.*

THIS ſpecies has a long head, and a blunt noſe; lips rough and ſwelling out; and ears ſhort, round and flat. Its tail is the ſhorteſt of any of the genus, ſcarce appearing out of the hair: its fur is very ſoft and full, aſh mixed with duſky, with a dark line along its back: its body is between three and four inches long. It inhabits the country about the *Yaik*, the *Irtiſh* and the *Jeneſey*. They love a firm dry ſoil, burrow, and make two entrances, the one oblique, the other perpendicular.

The males fight for the females, and devour each other. They are very ſalacious. When in heat, they emit a muſky ſmell. They bring ſix at a time. Like the marmots, they are ſlow in their motions, and ſleep rolled up like them. They are very fond of dwarf iris; but feed on all ſorts of ſeeds. They alſo migrate in great troops; and the *Tartars* call them the *rambling mouſe*.

XXVIII. XXIX. & XXX.—*The Social, the Meadow, and the Gregarious Mouſe.*

THE *ſocial mouſe* has a thick head; a blunt noſe; naked oval ears; ſhort ſtrong limbs; and a ſlender tail. The upper part of the body is of a light grey, paleſt on the ſides: the ſhoulders and belly are white: the body is above three inches: the tail one and a half. It inhabits the *Caſpian* deſert, and the country of *Hyrcania*. They

live in low ſandy graſſy places, in great ſocieties. Their burrows are about a ſpan deep, with eight or more paſſages. They are always found, either in pairs, or with a family. They rarely appear in autumn; but ſwarm in the ſpring. They are ſaid to migrate, or change their place in autumn, or to conceal themſelves among the buſhes; and in winter to ſhelter themſelves in hay ricks. They breed later than the other kinds; feed much on tulip roots; and are the prey of weaſels, crows and vipers.

The *meadow mouſe* or *rat*, the *mus terreſtris* of *Linnæus*, has a large head; a blunt noſe; ſhort ears hid in its fur; prominent eyes; and a ſhort tail. The head and body are ferruginous, mixed with black: its belly, a deep aſh colour: its feet duſky: its body is ſix inches long: its tail one and a half, covered with hair, and tufted. It inhabits *Europe*. It is alſo found in great abundance in *Newfoundland*, where it does much miſchief in the gardens. In *England*, it makes its neſt in moiſt meadows; brings eight young at a time, and has a very great affection for them. It reſides under ground, and lives on nuts, acorns, and corn.

The *gregarious mouſe* has a ſmall mouth and blunt noſe; its ears are naked, and appear above the fur. The hair on the upper-part of its body is black at the roots and tips, ferruginous in the middle; its throat, belly, and feet, are whitiſh; its tail, which is one third of the length of its body, is covered with thin white hairs.

It is a little larger than the common mouſe, inhabits *Germany* and *Sweden*, eats ſitting up, burrows and lives under ground.

The

The fifth claſs of rats is diſtinguiſhed by ſhort tails, and a pouch in each jaw:

XXXI.—*The Hamſter.*

THIS ſpecies of the rat has large rounded ears, and full black eyes; it is of a reddiſh brown, having red cheeks, with a white ſpot beneath, and another behind each, and a fourth near the hind legs; its breaſt, the upper part of its fore-legs, and its belly, are black; its tail is ſhort and almoſt naked; it has four toes and a fifth claw on the fore feet, five behind; it is about nine inches long, its tail three. The males are always bigger than the females. Some males weigh from twelve to ſixteen ounces; the females ſeldom exceed ſix. They vary ſometimes in colour. A family of them is frequently found about *Caſan* entirely black. They inhabit *Auſtria*, *Sileſia*, *Poland*, and the *Ukraine*; and as far to the eaſt as the *Jeneſey*. They are fond of a ſandy ſoil abounding in liquorice, and feed on its ſeeds. They are very deſtructive to grain, eating great quantities, and carrying off ſtill more to hoard it: On ſuch occaſions, they fill their cheek pouches, which will contain the fourth of an *Engliſh* pint, ſo full that they ſeem ready to burſt. They live under ground, and form their burrows obliquely; at the end of the paſſage, the male ſinks one perpendicular hole, the female ſeveral: at the end of theſe are formed various vaults, either as lodgings for themſelves and their young, or as ſtorehouſes for their food; each young one has its different apartment, each ſort of grain its different vault. Their

* Mus Ericetus of the Syſt. Nat.

Their lodgings are lined with ſtraw or graſs. Their vaults are of different depths, according to the age of the animal. A young Hamſter digs ſcarcely one foot deep: an old one four or five. The diameter of the habitation of a family, with all its communications, is from eight to ten feet. The male and female have always ſeparate apartments; for, excepting their ſhort ſeaſon of courtſhip, they have no intercourſe. The whole race is ſo malevolent, that they conſtantly reject all ſociety with one another. They will fight, kill, and devour their own ſpecies. The female brings forth two or three times in a year, from ſixteen to eighteen at a birth. Their growth is very quick. At the age of three weeks, the old one forces them out, and obliges them to ſhift for themſelves. She ſhews little affection for them at any time; even when they are young, in caſe of danger, ſhe attempts to burrow deeper to ſave herſelf, but entirely neglects her brood: on the contrary, if attacked in the time of courtſhip, ſhe defends the male with the utmoſt fury.

They lie torpid from the firſt cold to the end of winter; and during that time are ſeemingly quite inſenſible, and have the appearance of being dead. Their limbs are ſtiff, and their bodies cold as ice: not even ſpirits of wine, or oil of vitriol, poured into them, can produce the leaſt mark of ſenſibility. It is only in places beyond the reach of the air that they become torpid; for the ſevereſt cold on the ſurface does not affect them.

The hamſter, in its annual revival, begins firſt to loſe the ſtiffneſs of its limbs, then breaths deeply, and by long intervals: On moving its limbs, it opens its mouth, and makes a rattle in its throat. It is not till after ſome days that it opens its eyes and attempts to ſtand; but even then,

then, it makes its efforts like a perſon very much in liquor. At length, when it has attained its uſual attitude, it reſts for a long time in tranquillity, ſeemingly to recollect itſelf, and recover from its fatigue.

They begin to lay in proviſions of corn, peas, and beans, in Auguſt. As ſoon as they have finiſhed their work, they ſtop up the mouth of their paſſage carefully. In winter the peaſants go what they call a *Hamſterneſting*; and, when they diſcover their retreat, dig down till they diſcover the hoard, and are commonly well paid; for, beſides the ſkins of the animals, which are valuable furs, they find commonly two buſhels of good grain in the magazine.

Theſe animals are very fierce; they will jump at a horſe if he happens to tread near them, and will hang by his noſe in ſuch a manner that it is difficult to diſengage them. They make a noiſe like the barking of a dog. In ſome ſeaſons they are ſo numerous as to occaſion a dearth of corn, and on that account are preſcribed. In *Gotha*, in one year, eighty thouſand and upwards of their ſkins were preſented at the *Hotel de Ville*. But polecats are their greateſt enemies, for they purſue them into their holes and deſtroy numbers. It is remarkable, that the hair ſticks ſo cloſe to the ſkin as not to be plucked off but with the utmoſt difficulty.

XXXII. XXXIII. & XXXIV — *The Vormela, Yaik, and Mus Phaeus.*

THE *vormela* is leſs than the hamſter; its whole body is marked with yellow and tawny ſpots; its tail is cinereous, and white tipped with black. Pennant thinks it may poſſibly be the ſame with the *Sarmatian* weaſel.

The *Yaik* has a thick ſnout, a blunt noſe, and very fleſhy lips; its upper lip is divided; its upper fore-teeth are ſmall, yellow, convex, and truncated; the lower ſlender and pointed; its eyes are large; its naked ears ſtand up high above its fur; its tail is ſhort and cylindrical; its face is white; its body, four inches long, is of a cinereous yellow, mixed with brown above, below of a hoary whiteneſs. It inhabits the deſerts about the *Yaik*, quits its burrow, and runs about during the night.

The *Mus Phaeus* has its forehead much elevated; the edges of its eye-lids are black; its ears are naked and oval, ſtanding far out of the fur; it is of a hoary aſh colour, with duſky hairs above; its ſides whitiſh; the under ſide of the body, and the extremities of its limbs, are of a ſnowy whiteneſs; it is about three inches and a half long, and inhabits the deſerts of *Aſtracan* and the *Hyrcanian* mountains. About the *Perſian* villages in *Hyrcania*, it commits great ravages among the rice. It does not grow torpid during the winter.

XXXV. XXXVI. & XXXVII.—*The Sand Rat, Songar, and Baraba.*

THE *ſand rat* has a ſharp noſe, very large pouches, great oval brown ears, white nails, and a ſhort hoary body: its ſides, belly, limbs, and tail, are of a pure white: it is four inches long; its tail above one: it inhabits and burrows in the ſandy plains near the river *Irtiſh*.

The *Songar* is of a grey colour; has a thick head and a blunt noſe; its ears are oval, very thin, and lightly covered with a hoary down; its tail is ſhort, blunt, thick, and hairy. A black line runs along itsback: its ſides are ſpotted with white: its belly and legs are white. They are found in the ſame country with the ſand rat. Dr. *Pallas* kept ſome of them a great while. They grew familiar; would feed from his hand, lap milk; and, when placed on a table, ſhewed no deſire of running away. They were ſlower in all their motions than the other ſpecies; waſhed their faces with their paws, and ſat up to eat; wandered about during the day, and ſlept all night rolled up. They ſeldom made any cry; and, when they did, it was like that of a bat.

The *Baraba rat*, about three inches and a quarter long, has a ſharp noſe, large broad naked ears of a duſky colour, edged with white. It is of a cinereous yellow above, below of a dirty white. A black line extends from the neck to near the tail: the tail, near one inch long, is white, marked with a duſky line. They inhabit the ſan-

dy plain of *Baraba*, towards the *Oby*; and about the lake *Dalai*, in the *Chineſe* empire.

The laſt diviſion of mice lead a ſubterraneous life, and have thence been named *mole rats*.

XXXVIII.—*The Blind Mole Rat.*

THIS rat has a great head, broader than the body, and not the leaſt aperture for eyes; yet beneath the ſkin are found what may be called the rudiments of thoſe organs, though not larger than the ſeed of a poppy. It has no external ears: the end of its noſe is covered with a thick ſkin; its noſtrils are remote, and placed below; its mouth gapes, and the teeth are expoſed; thoſe above are ſhort; the lower ones are very long, and their ends are quite uneven: its body is cylindrical; its limbs ſhort; it has five toes on each foot, with ſhort claws: its hair is ſhort, thick, and ſoft; duſky at the bottom, grey above, white about the mouth and noſe. It is between ſeven and eight inches long. A male one will weigh above eight ounces. It inhabits the ſouthern parts of *Ruſſia*, from *Poland* to the *Wolga*. It delights in moiſt and turfy ſoils. The earth it throws up in hillocks of two yards in circumference. It works with great agility. On any apprehenſion of an enemy, it forms inſtantly a perpendicular burrow. Its bite is very ſevere. When irritated, it ſnorts and gnaſhes its teeth, but emits no cry. It often quits its hole, eſpecially in the morning, and during the amorous ſeaſon,

ſeaſon, along with the female, to baſk in the ſun. In *Ukraine*, the vulgar believe that the touch of a hand, which has ſuffocated this animal, has the ſame virtue in curing the king's-evil, as was once believed to be inherent in the now abdicated Royal Family of *Great Britain*.

XXXIX.—*The Dauurian Rat.*

THIS creature has a thick flat head, a ſhort ſnout, and a blunt noſe. Its upper fore-teeth are naked; a moveable lip covers the lower: it has no external ears; its eyes are very ſmall, yet viſible; its body is ſhort and depreſſed; its limbs are very ſtrong, eſpecially the fore-legs; its tail is ſhort, its hair ſoft and looſe, of a greyiſh colour. They meaſure from ſix to nine inches; inhabit the *Arctic* mountains, and beyond lake *Baikal*; burrow a little below the ſurface; have a voice weak and plaintive.—The *Ruſſians* call it the *earth bear*.

XL. XLI. & XLII.—*The African, the Cape, and the Talpine Rat.*

THE *African* rat has a large head, a black noſe, flat and corrugated; its eyes are minute, and much hid in the fur; it has no ears; its tail, about two inches long, is compreſſed and covered above and below with ſhort hair, and edged with briſtles, diſpoſed horizontally. It is of a cinereous brown, paleſt on the lower parts, and about

thirteen inches long. It inhabits the ſandy country near the *Cape of Good Hope*; it burrows, and makes the ground ſo hollow as to be very inconvenient for travellers; for it breaks every ſix or ſeven minutes under the horſes feet, and lets them in up to the ſhoulders. It grows to the ſize of a rabbit, and is, by ſome, eſteemed a good diſh.

The *Cape* rat is about ſeven inches long, and is very deſtructive to the gardens about the *Cape*. Its tail is very ſhort, beſet with briſtles. Though the reſt of its noſe is white, yet the end of it is naked and black. Its head, cheeks, back, and ſides, are of a ruſty brown; but it has a white ſpace round its eyes and ears.

The *Talpine* rat, about four inches long, has a large ſhort head, and a thick truncated ſnout. Its upper teeth are long and flat, extending out of its mouth: its eyes are ſmall, hid in its fur; its ears are bounded by a ſmall rim; its tail ſcarce appears without the fur; its upper parts are duſky; its chin, belly, and limbs, are whitiſh. It inhabits the open grounds of the temperate parts of *Ruſſia* and *Siberia*: it loves a black turfy ſoil, and is frequent in meadows near villages. Its manners reſemble thoſe of the mole. They do not become torpid in the winter; but make their neſt deep in the ground, and keep themſelves warm by lining it with ſoft graſs. They are very eaſily taken, but ſoon grow ſick in confinement, unleſs a quantity of earth is put into the place where they are kept. They are in heat in the end of March or beginning of April; the females have then a ſtrong muſky ſmell: they bring three or four at a time. They vary in colour; ſome are found quite black.

GENUS XXXIV.—*The Shrew.*

OF this genus there are twelve ſpecies. Their generic characters are, two cutting teeth in each jaw, pointing forward; a long ſlender noſe; ſmall ears; and five toes on each foot.

I. & II.—*The Muſky and Perfuming Shrew.*

THE former, ſeven inches long, and of a duſky colour, has no external ears, very ſmall eyes, and a tail of eight inches, compreſſed ſideways: its belly is of a whitiſh aſh colour: it inhabits the river *Wolga*, and the lakes adjacent; it is very ſlow, and never wanders far from lakes and rivers. It makes its hole in the banks, far below the loweſt fall of the water, and works upwards, not ſo high as to reach the ſurface, but only to be out of the reach of the higheſt riſe of the water: it feeds on fiſh, but is itſelf devoured in its turn by the *pikes* and *ſiluri*; and gives thoſe fiſh ſo ſtrong a flavour of muſk as to render them not eatable. Out of its tail is expreſſed a ſort of muſk, very much reſembling the genuine kind. Their ſkins are put into cheſts among cloaths to drive away moths, and to preſerve the wearers from peſtilence and fevers. They are ſo common near *Nizney Novogorod*, that the peaſants frequently bring 500 a-piece to market, and ſell them for one ruble *per* hundred.

The

The *Perfuming Shrew* is near eight inches long. Its upper jaw extends far beyond the lower: its upper fore-teeth are ſhort, the lower long and ſlender: it has long white whiſkers; ſmall eyes; ears tranſparent, broad and round; and a fine coat of ſhort cloſe hair, of a pale caerulian on the upper parts, lighter beneath; with white feet. It inhabits *Java*, and others of the *Eaſt Indian* iſlands. It eats rice; but has ſo ſtrong a ſcent of muſk as to perfume every thing it runs over. It is ſaid, that by merely paſſing over it, it will render the wine in a well-corked bottle not drinkable. Cats will not touch them.

III. IV. & V.—*The Mexican, Brazilian, and Murine Shrew.*

The *Mexican* ſhrew is about nine inches long, having ſhort hair of a tawny colour. It is without ſight, of a thick, fat, and fleſhy body. Its legs are ſo ſhort that its body almoſt touches the ground: it burrows and makes ſuch a number of cavities, that travellers can ſcarcely tread with ſafety: it feeds on roots, kidney beans, and other ſeeds; and is eatable. *Buffon* thinks it a *mole*; but from its ears Mr. *Pennant* claſſes it here.

The *Brazilian* ſhrew, five inches long, is of a duſky colour, and is marked along the back with three broad black ſtrokes. Its ſcrotum is pendulous; and its tail meaſures two inches: it does not fear the cat; neither does that animal hunt after it.

The *Murine* ſhrew, ſo called as being of the ſize of a common mouſe, is of an aſh colour, and inhabits *Java*: it

it has a long noſe, hollow beneath, with very long hair about its noſtrils; ears rounded, and rather naked; the tail a little ſhorter than the body, and not ſo hairy.

VI. & VII.—*The Fetid and the Water Shrew.*

THE fetid ſhrew is the *ſorex araneus* of *Linnæus*. Its eyes are ſmall, and almoſt hid in its fur: its head, and the upper part of its body are of a browniſh red: its belly of a dirty white: it is only two inches and a half long; its tail one and a half: it inhabits *Europe*, *Siberia*, and even the *Arctic* flats, and *Kamſchatka*: it is alſo found about the *Caſpian* ſea; lives in old walls, heaps of ſtones, or holes in the earth; feeds on corn, inſects, or any filth, and has a diſagreeable ſmell: cats will kill, but not eat it: it brings four or five young at a time. There ſeems to be an annual mortality of theſe animals in Auguſt, numbers of them being then found dead in the paths.

The Water Shrew has, like the reſt, a long ſlender noſe; very minute ears, and within each a tuft of white hairs, very ſmall eyes hid in the fur. The colour of the upper part of its body is black: its throat, breaſt, and belly, are of a light aſh colour; the feet are white; it has a triangular duſky ſpot beneath the tail: it is three inches and three quarters long; its tail two.

It inhabits *Europe* and *Siberia*, as far as the river *Jeneſay*; burrows in the banks of rivers; is ſaid to ſwim under water; and chirrups like a graſshopper.

VIII.—XIII.—*The Minute Shrew, Pygmy, &c.*

THE head of the *Minute Shrew* is near as big as the body; its whiſkers reach to its eyes, which are very ſmall, and capable of being drawn in: its hair is very fine and ſhining, grey above and white beneath: it is found about the *Oby* and near the *Kama*: it lives on ſeeds; digs; runs ſwiftly; and has the voice of a bat.

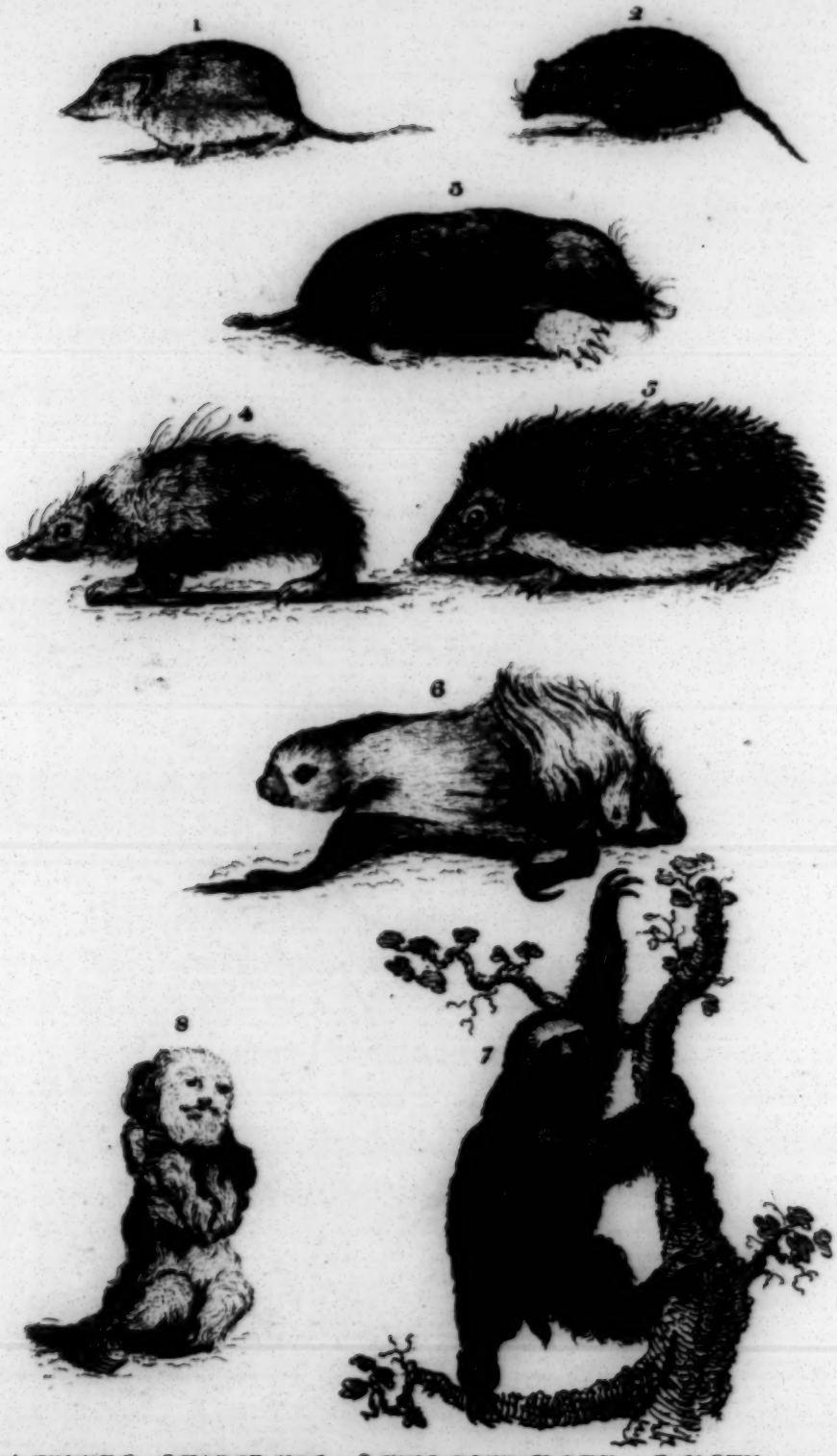
The *Pygmy* ſhrew is, in ſhape and colour, like the *Fetid*, but paler: its tail is ſmall at both ends, and thick in the middle; it is very common about the *Jeniſay* and the *Oby*: it weighs about half a drachm only; and is thought to be the leaſt of all quadrupeds.

The *white toothed*, *ſquare tailed*, *carinated*, and *unicolor ſhrews*, have little to diſtinguiſh them except their generic characters, and thoſe peculiarities from which they take their name. The *carinated* has that name, from the tail being ridged below like the keel of a veſſel.

Theſe four ſpecies inhabit the neighbourhood of *Straſburg*.

Plate XLIV.

1, SHREW MOUSE 2. SHORT TAILD FIELD MOUSE 3.MOLE



4. TENREC 5.HADGE HOG 6.TWO TOED SLOTH 7. SLOTH
8. YOUNG THREE TOED SLOTH

GENUS XXXV.—*The Mole.*

THE characters of this genus are, a long noſe; the upper jaw much longer than the lower; no ears; fore-feet very broad, with ſcarcely any apparent legs before; and ſmall hind-feet.

There are only ſix ſpecies belonging to this genus.

I.—*The European Mole.*

THE *European* mole has a long ſnout, ſix cutting teeth in the upper jaw, eight in the lower, and two canine in each; no external ears, only an orifice; very minute eyes, hid in the fur: the fore-part of the body is thick and muſcular; the hind part taper. The fore-feet are placed obliquely; they are broad, and have the appearance of hands, with five fingers each, terminated by ſtrong claws. The hind-feet are very ſmall, but have five toes each. Their tail is very ſhort; and their ſkin ſo tough, as ſcarcely to be cut through. The hair is cloſe, ſhort, and ſofter than the fineſt velvet; uſually black; ſometimes ſpotted with white; ſometimes quite white. It is about five inches and three quarters in length: its tail one. It inhabits *Europe*, except *Ireland*, and *Siberia* as far as the river *Lena*; but the *Siberian* is much larger than the *European* mole. It lives under ground; burrows with vaſt rapidity, with its fore-feet; flings the earth back with its hind-feet; has the ſenſe of ſmelling in an exquiſite degree, which directs

it to its food, conſiſting of worms, inſects, and roots. It does vaſt damage in gardens, and is moſt active before rain, worms being then in motion: it breeds in the ſpring; brings four or five young at a time: it raiſes no hillocks in dry weather: it utters a ſcream when taken. *Palma chriſti* and *white hellebore*, made into a paſte and laid in their holes, is ſaid to deſtroy them. There is a variety found in *North America* reſembling the *European*, but larger, with hair, ſoft, ſilky, and gloſſy, of a yellowiſh brown colour, brighteſt about the head, darkeſt about the rump; with a brown belly: its feet and tail are white.

II. III. & IV.—*The Cape Mole, the Radiated, and Long-tailed Mole.*

THE *Cape mole*, called by Mr. *Pennant* the *Siberian*, though he ſays it inhabits the *Cape* of *Good Hope* and not *Siberia*; has a ſhort blunt noſe; from each corner of its mouth a broad whitiſh bar, pointing upwards along the ſides of its head: the upper part of its body is varied with hair of a gloſſy green, and copper colour: the under parts are brown. On each of the fore-feet there are three toes with vaſt claws. On each of the hind-feet there are five ſmall toes, with weak claws. It has no tail, but a round rump.

The *radiated mole* has ſmall, but broad fore-legs, with five long white claws on each; a long noſe, having its ſides beſet with radiated tendrils; very ſhort, duſky, fine, compact hair; ſcaly hind-legs, with five toes on each foot. It meaſures three inches and three quarters; its

its tail one and three-tenths. It inhabits *North America*; forms ſubterraneous paſſages in uncultivated fields, raiſes walks for itſelf about two inches high, and a palm broad: it feeds on roots; and has great ſtrength in its legs.

The *long-tailed mole* has a radiated noſe too, and inhabits *North America* alſo; the claws on the fore-feet are like thoſe of the common mole; thoſe on the hind-feet are very long and ſlender; its hair is ſoft, long, and of a ruſty brown; four inches and a half long; its tail two.

V. & VI.—*The Brown and the Red Mole.*

THE *brown mole* has a ſlender noſe; no canine teeth; hair brown at the ends, deep grey at the bottom, very ſoft and gloſſy; its tail and feet white; its length five inches and a half; its tail is very ſlender, and not one inch long. It alſo inhabits *North America.*

The hiſtory of the *red mole* reſts on the authority of *Seba*, who is not ſo particular as to inform us whether it inhabits *North or South America.* He ſays it has three toes on the fore-feet, and four on the hind; and that the form of its body and tail is like the *European* kind.

GENUS XXXVI.—*The Hedge Hog.*

THE marks of this genus are few; five toes on each foot, and a body covered with ſtrong ſhort ſpines. It contains only four ſpecies.

I. *The Common Hedge Hog.*

THE *common hedge-hog* has a long noſe; his noſtrils are bordered on each ſide with a looſe flap; his ears are ſhort, rounded, broad, and naked; his eyes are ſmall; his legs ſhort, naked, and duſky; his inner-toe is the ſtrongeſt; his claws are weak: the upper part of his face, his ſides, and rump, are covered with ſtrong coarſe hair of a yellowiſh aſh colour; the back with ſtrong ſharp ſpines of a whitiſh colour, with a bar of black through their middle. His length is ten inches; the length of his tail one. He inhabits *Europe* and *Madagaſcar*. He is common in many parts of *Ruſſia*; but is ſcarce, if ever found, in *Siberia*. He is in motion during the night, but keeps retired during the day; feeds on roots, fruits, and inſects; reſides in ſmall thickets and hedges; lies well wrapped up in moſs, graſs, or leaves; and, during winter, he rolls himſelf up and ſleeps out that dreary ſeaſon. On the approach of an enemy he rolls himſelf into the form of a ball, all covered with ſharp prickles; and is then invulnerable.

II.—*The Siberian Hedge Hog.*

THIS ſpecies, which is common from the *Don* to the *Oby*, is generally much inferior in ſize to the common kind; but beyond the lake *Baikal* ſome are found much larger.

They grow very fat; ſleep all the winter in a hole a few inches deep; live on inſects, even the moſt cauſtic; and will eat above a hundred cantharides without any injury. They roll themſelves up, and have all the manners of the common kind.—In the following particulars they differ from the former ſpecies: Their ears are large, open and oval, with ſoft whitiſh hairs within; the tail is ſhorter; the ſpines are ſlender and brown, white at their roots and points: and the limbs and belly are covered with a moſt elegant ſoft white fur.

III. & IV.—*The Aſiatic and Guiana.*

THE former ſpecies, the *tendra* of *Buffon*, about the ſize of a mole, has the upper part of the body covered with ſhort white ſpines, marked with brown in the middle, the lower parts with whitiſh, fine, but hard hair. The tail, which is very ſhort, is alſo covered with ſpines.

There is a larger variety of this ſpecies, which *Buffon* calls *Tanrec*; each of theſe varieties have five toes on each

each foot; they inhabit *India* and *Madagaſcar*. Some are ſaid to grow to the ſize of rabbits. They are alſo ſaid to grunt like hogs; to grow very fat; to multiply greatly; to frequent ſhallow pieces of water; to burrow on land; and to lie torpid during ſix months; during which time their old hair falls off, and they riſe in a new ſuit. Their fleſh is eaten by the *Indians*, but is very flabby and inſipid.

The *Guiana*, or *American hedge-hog*, has no external ears; a ſhort thick head; ſpines aſh colour, tinged with yellow; its lower parts are covered with ſoft whitiſh hair: it has a ſhort tail; long and crooked claws; and is about eight inches long.

Div. II. Sect. IV.

Digitated Quadrupeds, without cutting Teeth.

Genus XXXVII.—*The Sloth.*

Animals belonging to this genus, of which there are only two ſpecies, are ſtrongly marked; and their name indicates their manners. They are without cutting teeth in either jaw. They have canine teeth and grinders; fore-legs much longer than the hind: and long claws on their toes.

I.—*The Three-toed Sloth.*

This ſingular animal has a naked face, a blunt black noſe, a little lengthened: very ſmall external ears, eyes ſmall, black and heavy, with a duſky line from the corner of each: its face and throat are of a dirty white: the hair on its body is long and very uneven, of a greyiſh brown, with a black line along the middle of its back: the reſt of its back, ſhoulders, and limbs, are ſpotted irregularly with black: its tail is a mere ſtump: its legs are thick, long, and awkward: it grows to the bulk of a middle-

middle-ſized fox; and inhabits moſt parts of the eaſtern ſide of *South America*. It is the moſt ſluggiſh and the moſt ſlow of all animals, and ſeems to move with the utmoſt pain. Three quarters of a mile in a day is a great journey. It aſcends trees, in which it generally lives, with great difficulty: its food is fruits or leaves. When on the ground, if it cannot find fruit there, it looks out for a tree well-loaded; and, with great pains, climbs up. It then flings off the fruit, and, to ſave itſelf the trouble of deſcending, forms itſelf into a ball and drops from the branches. There it continues till it has devoured all; nor ever ſtirs till compelled by hunger. Its motion is attended with a moſt moving and plaintive cry, which at once produces both pity and diſguſt. Every beaſt of prey is ſo affected by its noiſe as to quit it with horror. Its mouth is never without foam. Its look is ſo piteous as to move compaſſion; it is alſo accompanied with tears, which diſſuade every body from injuring ſo wretched a being. How unlike the ſportive ſquirrel, and many other lively inhabitants of the woods! Its abſtinence from food is almoſt incredible. One that had faſtened itſelf by its feet to a pole, and was ſo ſuſpended croſs two beams, remained forty days without meat, drink, or ſleep. The ſtrength in its feet is ſo great, that there is no poſſibility of freeing any thing from its claws. A dog was let looſe at the above-mentioned animal when it was taken from the pole. After ſome time the *Sloth* laid hold of the dog with his feet, and held him four days, till he periſhed with hunger.

II.—*The Two-toed Sloth.*

THIS ſpecies of the *ſloth* has a round head; a ſhort projecting noſe; ears like thoſe of the human body, lying cloſe to the head; two long and ſtrong claws on the fore-feet, three on the hind; hair long and rough, in ſome parts curled and woolly; in ſome, of a pale red above, aſh brown below; in others of a yellowiſh white below; aſh brown above. It inhabits *South America* and *Ceylon*. *Buffon* reſtricts its reſidence to *America* alone: but *Pennant* aſſerts that he has good authority for believing it common to both continents.

Genus XXXVIII.—*The Armadillo.*

Without either *cutting* or *canine* teeth; the head and upper part of the body are guarded by a cruſtaceous covering, the middle with pliant bands, formed of various ſegments, reaching from the back to the edges of the belly.

Had this genus been known in the old world, and had men been diſpoſed to take the hint of defenſive armour from quadrupeds, ſome might have thought that the *hedge hog* had ſuggeſted the idea of the *globe* of warriors with portended ſpears, and the *Armadillo* that of a plated coat of mail: but for want of the *Armadillo* they might ſubſtitute, from a different element, the *lobſter*, to ſupport a theory, and furniſh out an army of *Catapracti*.

The ſeveral ſpecies of this genus, ſix in number, are marked each by the number of bands that form its coat of mail.

I.—*The Three-banded Armadillo*

Has ſhort, but broad rounded ears. The cruſt on its head, back, and rump, is divided into elegant pentangular ſegments raiſed in the middle. The middle of its body has three bands, whence its name. It has five toes on each foot; and a ſhort tail.

The whole genus inhabits *South America*, and the manners of all the ſpecies are much the ſame. They burrow under ground; the ſmaller ſpecies in moiſt places, the larger in dry; and at a diſtance from the ſea. They keep

Plate XLV.

1. SIX BANDED ARMADILLO 2. TWELVE BANDED ARMADILLO



3. LONG TAILED ARMADILLO 4. LONG TAILED MANIS

5. SHORT TAILED MANIS 6. GREAT ANT-EATER 7. LESS ANT-EATER

keep in their holes by day, but ramble out at night. When overtaken by an enemy, it rolls itſelf into the form of a ball, and becomes invulnerable. When ſurpriſed, it runs for its hole, and thinks itſelf ſecure if it can hide its head and part of its body. They are hunted with little dogs, who give notice of their haunts by barking. But caution is neceſſary in taking them out, as ſnakes often lurk in their burrows. They feed on potatoes, melons, and roots, drink much, grow very fat, and are reckoned delicious eating when young; but when old, they have a muſky diſagreeable taſte. They are very numerous, as they breed every month, and bring four at a time. They are very inoffenſive.

II. *The Six-banded Armadillo*

HAS its cruſt formed of angular pieces, with ſome ſcattered hairs between. Its tail, which is not the length of the body, is very thick at the baſe, and tapers to a point. It has five toes on each foot, and inhabits *Brazil* and *Guinea*.

III.—*The Eight-banded Armadillo*

HAS upright ears, two inches long; ſmall black eyes; four toes on the fore-feet, five on the hind. It is ten inches long; its tail is nine. It inhabits *Brazil*; and is reckoned more delicious eating than the others.

IV.—*The Nine-banded Armadillo*

HAS long ears; long hair on the breaſt and belly; four toes on the fore-feet, five on the hind; is three feet long; and the tail, which tapers, is a little longer than its body. Its cruſt is marked with ſix-ſided figures; its bands

with wedge-like marks acroſs. One, brought ſome years ago to *England* from the *Muſquito* ſhore, was fed with raw beef and milk, but refuſed grain and fruit; though this genus wants, as has already been obſerved, both cutting and canine teeth.

V.—*The Twelve-banded Armadillo*

Has broad upright ears. The cruſt on its ſhoulder conſiſts of oblong pieces; that of the rump of ſix ſided pieces: it has five toes on each foot; thoſe of the fore-feet have very large claws. Its tail is ſhorter than the body.

VI.—*The Eighteen-banded Armadillo*

Has a very ſlender weaſel-looking head, and ſmall erect ears. The cruſt on its ſhoulders and rump conſiſts of ſquare pieces. It has five toes on each foot: is about fifteen inches long; *its tail only five and a half.*

DIV. II. SECT. V.

Digitated Quadrupeds, without Teeth.

GENUS XXXIX.—*The Manis.*

THIS genus has the back, ſides, and upper part of the tail covered with large ſtrong ſcales; a ſmall mouth; a long tongue; and no teeth. There are only two ſpecies belonging to it, diſtinguiſhed by the length of their tails.

I.—*The Long-tailed Manis*

HAS a ſlender noſe: both its noſe and head are ſmooth: its body, legs, and tail, are guarded by long ſharp-pointed ſtriated ſcales: its throat and belly are covered with hair: its legs are ſhort, with four claws on each foot, one of which is very ſmall; its tail tapers, but ends blunt. *Guinea* is ſuppoſed to be their native country. They approach ſo near the genus of *lizards*, as to be accounted the link in the chain of beings which connects the proper quadrupeds with the reptile claſs. They grow to a great length. One preſerved in the Muſeum of the Royal Society, *London*, meaſured from the noſe to the tail only fourteen inches; but the tail itſelf a yard and half a quarter.

II.—*The Short-tailed Manis*

Has blunt ſcales, with briſtles between them; five toes on each foot; a tail longer than the body; and ears not unlike thoſe of the human body. It inhabits *Formoſa*, and other iſlands of *India*: feeds on lizards and inſects: turns up the ground with its noſe; ſnorts; grows very fat, and is eſteemed very delicate eating.

Mr. *Pennant* thinks that this may alſo be the ſpecies of animal, which, *Des Marchais* ſays, grows to the length of eight feet, of which the tail is four. It lives in woods and marſhy places in *Guinea*; feeds on ants and inſects, which it takes by laying its long tongue, covered with a glutinous ſaliva, acroſs their path. It walks very ſlowly, and would be the prey of every ravenous beaſt, had it not the power of rolling itſelf up, and oppoſing to its enemy a formidable row of erected ſcales. In vain does even the leopard attack it with his vaſt claws; for at laſt he is obliged to leave it in ſafety. It is ſaid to deſtroy the Elephant by twiſting itſelf round his trunk, and compreſſing it with its hard ſcales. The negroes reckon its fleſh excellent.

Genus XL.—*The Ant Eater.*

This genus has the body covered with hair; a ſmall mouth; a long cylindric tongue, and no teeth. It contains only four ſpecies: The Great, the Middle, the Striped, and the Leaſt Ant Eater.

I.—*The Great Ant Eater*

Has a long ſlender noſe; ſmall black eyes; ſhort round ears; a ſlender tongue, two feet and a half long, which lies double in its mouth; ſlender legs; four toes on the fore-feet, and five on the hind; the two middle claws on the fore-feet very large, ſtrong, and hooked. The hair on the upper part of the body is half a foot long, black mixed with grey. Acroſs its ſhoulders there is a black line bounded above with white. The fore-legs are whitiſh, with a black ſpot above the feet. The hair of the tail is coarſe, black, and about a foot long. This animal is about three feet ten inches long; its tail two and a half: it weighs above a hundred pounds: it inhabits *Brazil* and *Guiana*; runs ſlowly; ſwims over the great rivers, at which time it flings its tail over its back: lives on ants; overturns their neſts, or digs them up with its feet, then thruſts its long tongue into their retreats, and withdraws it into its mouth loaded with prey: it is afraid of rain, and protects itſelf from it by covering its body with its long tail: It does not attain its

its full growth under four years. Each ſpecies of this genus brings but one young one at a time. Notwithſtanding its want of teeth it is fierce and dangerous, eſpecially when it has young. Nothing that it has once got between its fore-feet can diſengage itſelf; the very panthers of *America* are often unequal to the combat. So great is its obſtinacy and ſtupidity, that it will not extricate itſelf even from a dead adverſary. It ſleeps in the day, and preys by night. Its fleſh has a ſtrong diſagreeable taſte; but it is eaten by the *Indians*.

II.—*The Middle Ant Eater*

HAS a long ſlender noſe bending a little down; ſmall black mouth and eyes; and ſmall upright ears. The bottoms of its fore-feet are round, with four claws on each; the hind feet have five: its hair is hard and ſhining, of a pale yellow; duſky on the hind-legs and the middle of the back. A black line on each ſide, from the neck, croſſes the ſhoulders, paſſes along; and both meet at the lower end of the back. The tail, covered with longer hair than the back, tapers, and is bald at the end. This animal meaſures one foot ſeven, its tail ten inches. It inhabits the ſame country with the laſt, and reſembles it in its manners. When it drinks, part ſpurts out of the noſtrils. It climbs trees, and lays hold of the branches with its tail.

III.—*The Striped Ant Eater*

HAS a taper noſe: its upper mandible extends far beyond the lower: its eyes are exceedingly ſmall; ears round

round and ſhort; its tail is equally covered with long hairs: it has five toes on each foot: its body and tail are tawny; the firſt marked downwards with broad ſtripes of black; the laſt annulated: its legs and noſe are ſtriped in the ſame manner: its belly is of a dirty white. Length thirteen inches; tail ſeven and a half.

IV.—*The Leaſt Ant Eater*

Has a conic noſe, bending a little down; ſmall ears, hid in its fur; two hooked claws on the fore-feet, four on the hind: its upper parts are covered with long ſoft ſilky hair, or rather wool, of a yellowiſh brown colour. It is ſeven inches and a half long: its tail, which is thick at the baſe, and tapers to a point, meaſures eight and a half, and is naked on the under ſide for the laſt four: it inhabits *Guiana*, and climbs trees in queſt of a ſpecies of ants which build their neſts among the branches. It has the ſame prehenſile power with its tail as the former.

Div. III.——*Pinnated Quadrupeds,*

HAVING fin-like feet; fore-legs buried deep in the ſkin; hind-legs pointing quite backwards.

Genus XLI.—*The Walrus,*

WITH two great tuſks in the upper jaw, pointing downwards; four grinders on both ſides, above and below: no cutting teeth; five palmated toes on each foot.

This genus contains only two ſpecies; the *Arctic* and the *Indian.*

I.—*The Arctic Walrus,*

CALLED alſo the *Morſe*, *Sea-horſe*, and *Sea Cow*; has a round head; a ſmall mouth; very thick lips, covered above and below with pellucid briſtles as thick as a ſtraw; ſmall fiery eyes; two ſmall orifices inſtead of ears, and a ſhort neck: its body is thick in the middle, tapering towards the tail: its ſkin is thick, wrinkled, with ſhort browniſh hair thinly diſperſed: it has ſhort legs, five toes on each foot, connected by a web and a ſmall nail on each. The hind feet are very broad: each leg is looſely articulated: the hind-legs are generally extended on a line with the body. The tail is very ſhort, and the penis long.

The

The animal is about eighteen feet long, and ten or twelve round the thickeſt part. Their teeth have been ſometimes found of the weight of twenty pounds each.

They inhabit the coaſt of *Spitzbergen*, *Nova Zembla*, *Hudſon's Bay*, the *Gulph of St. Laurence*, and the *Icy Sea*; but are not ſeen in the iſlands between *Kamſchatka* and *America*. They are gregarious, and are ſeen in ſome places in herds of a hundred together. They are very ſhy, and avoid places much haunted by man. They are however very fierce, and, if wounded in the water, they attempt to ſink the boat, either by riſing under it, or by ſtriking their great teeth into its ſides. They roar very loud; and will follow the boat till it gets out of ſight. Numbers of them are often ſeen ſleeping on iſlands of ice: if awakened, they fling themſelves with great impetuoſity into the ſea. They do not go upon the land till the coaſt is clear of ice. At particular times they land in amazing numbers. The moment the firſt gets on ſhore, ſo as to lie dry, it will not ſtir ttll another comes and forces it forward, by beating it with its great teeth; this is ſerved in the ſame manner by the next; and ſo on in ſucceſſion till the whole have landed.

In the *Gulph of St. Laurence*, thoſe who hunt them watch their landing; and, as ſoon as they find a ſufficient number, they go on ſhore, each armed with a ſpear, ſharp on one ſide like a knife, with which they cut their throats. One *Walrus* produces about half a ton of oil. *Buffon* ſays he has ſeen braces for coaches made of their ſkin, which were both ſtrong and elaſtic.

They bring one, or at moſt two, young at a time; they feed on ſea herbs and fiſh, alſo on ſhells, which they dig out of the ſands with their teeth.

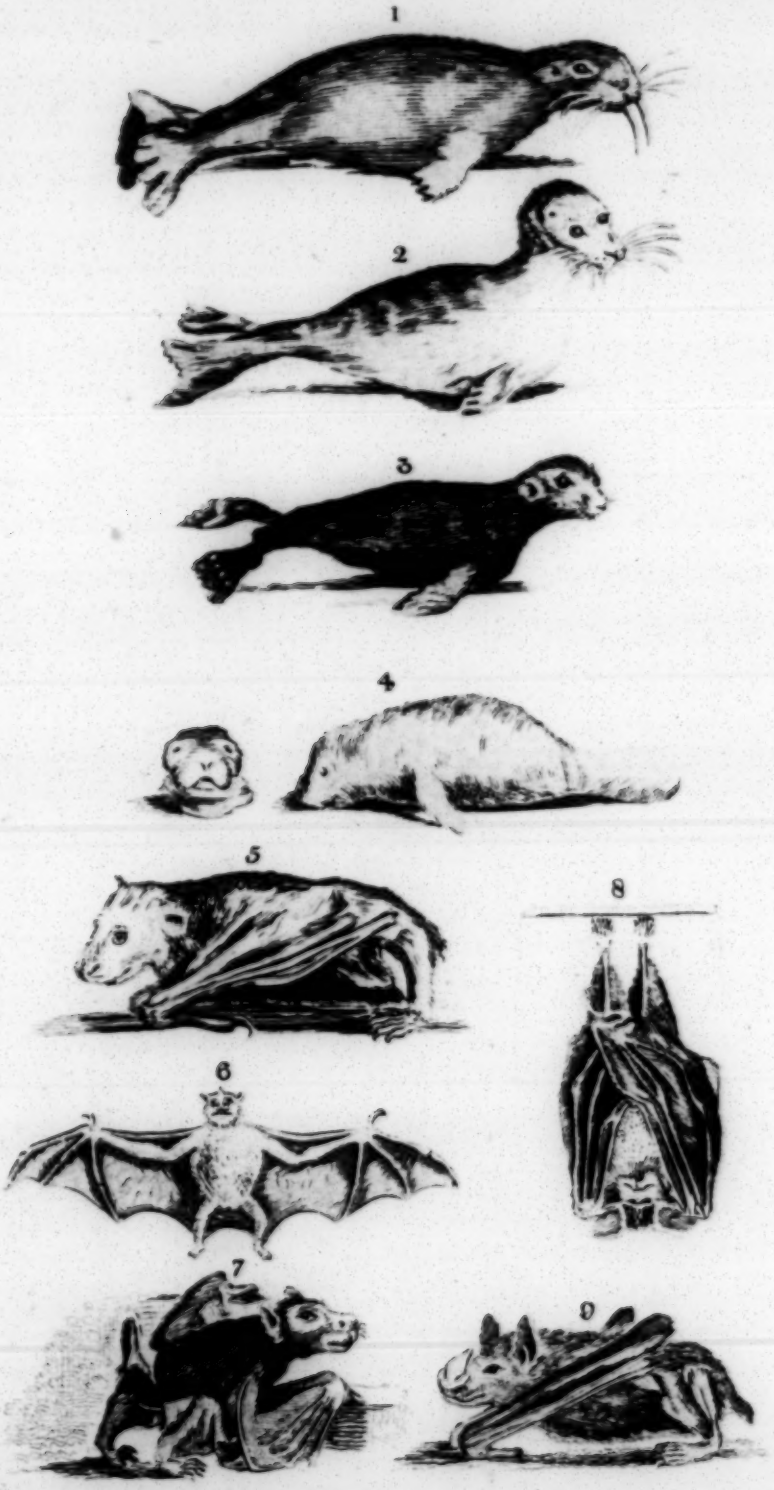
Beſides man, they ſeem to have no other enemy than the white bear, with whom they have terrible combats; but generally come off victorious by means of their great teeth.

II.— *The Indian Walrus*

Has two canine teeth, or tuſks, placed in the upper jaw, pretty cloſe to each other, and four grinders on each ſide, at a little diſtance from theſe tuſks; in theſe lower jaw three grinders on each ſide. It is found at the *Cape of Good Hope*, and among the *Philippine Iſles*; but little ſatisfactory is yet known reſpecting the natural hiſtory of this animal.

Plate XLVI.

1. WALRUS 2. SEAL 3. SMALL SEAL 4. YOUNG MONATI



5. TERNAT BAT 6. SHREW BAT 7. LARGE HEADED BAT

8. & 9. HORSE SHOE BAT'S

GENUS XLII.—*The Seal.*

THE ſeal has cutting teeth, and two canine ones in each jaw, and five palmated toes on each foot: its body is thick at the ſhoulders, and tapers towards the tail. This genus contains fifteen ſpecies.

I.—*The Common Seal, the Phoca of the Ancients,*

HAS large black eyes; large whiſkers; oblong noſtrils; and a flat head and noſe: its tongue is forked at the end. It has ſix cutting teeth in the upper jaw, four in the lower; no external ears; a ſhort tail. Its body is covered with thick ſhort hair; and its toes are furniſhed with ſtrong ſharp claws. Its uſual length is from five to ſix feet. Its colour is varions, duſky, brinded, or ſpotted with white or yellow: it inhabits moſt quarters of the globe, but in greateſt numbers towards the north and ſouth. They ſwarm near the *Arctic* circle, and in the lower parts of *South America*, in both oceans. They are alſo found in the *Caſpian* ſea, in the lake *Aral*, in the *Baikal* and *Oron*. Thoſe in the freſh water lakes are leſs than thoſe that frequent the ſalt water.

Seals bring two young at a time. They bring forth in *autumn*, and ſuckle their young, which are white and woolly, in caverns, or in rocks, till they are ſix or ſeven weeks old, when they take to ſea. They cannot continue

nue long under water: they are therefore very frequently obliged to riſe to take breath, and often float on the waves. In ſummer they ſleep on rocks, and on ſand banks; if ſurpriſed, they haſten to the ſea; if at any diſtance from it, they ſcramble along and fling up the ſand, and ſmall ſtones, with great force with their hind-feet, making a piteous moaning: if overtaken, they make a vigorous defence with their feet and teeth. A ſlight blow on the noſe kills them; otherwiſe they will bear numbers of wounds. They ſwim with vaſt ſtrength and ſwiftneſs; frolic greatly in their element, and ſport without fear about ſhips and boats, which may have given riſe to the fables of *ſea nymphs* and *ſirens*. They never go to any great diſtance from the land; feed on all ſorts of fiſh, and are themſelves good food, and are often eaten by voyagers: but they are generally killed, for the ſake of the oil made from their fat: A young ſeal will yield eight gallons. Their ſkins are uſed for waiſtcoats, covers for trunks, and other conveniences. Seals are the wealth of the *Greenlander*, ſupplying him with every neceſſary of life.

II.—*The Mediterranean Seal*

Has a ſmall head, and a neck longer than that of the *common ſeal*. The orifices of its ears are not larger than a pea: its hair is ſhort and rude, duſky, and ſpotted with aſh colour. The toes on its fore-feet are furniſhed with nails; the hind-feet are formed like fins, and are without nails.

nails. It is about eight feet and a half long, and five feet round. When placed on its back the ſkin of its neck folds like a Monk's hood. It inhabits the *Mediterranean*; as does alſo the *common ſeal;* but it has not yet been diſcovered in the *ocean*.

III.—*The Long-necked Seal*

Has a ſlender body, the length of which, from the noſe to the fore-legs, is equal to that from the fore-legs to the tail. Its fore-feet reſemble fins, and have no claws.

IV.—*The Falkland Iſles Seal*

Is about four feet long. It is covered with ſhort aſh-coloured hair, tipped with dirty white: its ſhort noſe is beſet with ſtrong black briſtles: it has ſhort narrow pointed little ears; no claws on the fore-feet; but on the toes of the hind-feet there are four long and ſtraight claws. They are found alſo as far diſtant as *New Zealand*.

V.—*The Tortoiſe-headed Seal*

Has its neck ſlenderer than its head and body; its feet are like thoſe of the common ſeal. It is found on the ſhores of many parts of *Europe*.

VI.—*The Rubbon Seal of the Kuril Iſles*

HAS very ſhort fine briſtly hair, of an uniform colour, almoſt black, marked along the ſides, and towards the head and tail, with a ſtripe of a pale yellow colour, exactly reſembling a ribbon, laid on it by art.

VII.—*The Leporine Seal*

IS covered with fur, ſoft as that of a hare, upright and interwoven, of a dirty white colour. Its whiſkers are long and thick, ſo that the animal appears bearded: its head is long; its upper lip thick: it has four cutting teeth both above and below; and nails on both the fore and hind-feet. Its uſual length is ſix feet and a half; its greateſt circumference five feet two. In inhabits the *White Sea* during the ſummer; and is found alſo off *Iceland*, and on the coaſt of *Spitzbergen*.

VIII.—*The Great Seal*

RESEMBLES the *common*, but grows to the length of twelve feet. It inhabits the north of *Scotland*, and the ſouth of *Greenland*.

IX.—*The Rough Seal*

Is covered with briſtly hair of a pale brown, intermixed like that of a hog. It inhabits *Greenland*. The natives make garments of its ſkin, turning the hairy ſide inmoſt. This is perhaps what our *Newfoundland* ſeal-hunters call *ſquare Phipper*, whoſe coat, they ſay, is like that of a water dog, and weighs ſometimes 500 pound.

X.—*The Hooded Seal*

Has a ſtrong folded ſkin on its fore-head, which it can fling over its eyes and noſe, to defend them againſt ſtones and ſand in ſtormy weather. Its hair is white, with a thick coat of black wool under it, which makes it appear of a fine grey. It inhabits only the ſouth of *Greenland* and *Newfoundland*. The hunters ſay they cannot kill it till they remove the integument on the head.

XI.—*The Harp Seal*

Has a pointed head, and a thick body of a whitiſh grey colour, marked on the ſides with two black creſcents, the horns pointing upwards towards each other. It attains this mark only in its fifth year; till this period it changes its colour annually, and is called by different

names each year. It inhabits *Greenland*, *Newfoundland*, *Iceland*, *the White Sea*, *and Frozen Ocean*, and paſſes through the *Aſiatic Strait* as far as *Kamſchatka*. It is the moſt valuable kind of any, both for its ſkin and oil. It grows to the length of nine feet.

XII.—*The Little Seal*,

About two feet four inches long, has ſoft ſmooth hair, longer than that of the common ſeal, duſky on the head and back, and brownish beneath: its teeth above are bifurcated, and two of them below are three pointed.

XIII.—*The Urſine Seal.*

There are three marine animals, which keep a particular ſituation, and ſeem divided between the N. E. of *Aſia* and the N. W. of *America*. Theſe are what are called the *Sea Lion*, the *Sea Bear*, and the *Manati*. Like the ſea-otters they are confined to the narrow ſeas, between lat. 50 deg. and 56 deg. They are alſo common in *New Zealand*, about *Staten Iſland* and the *Falkland Iſlands*. Mr. *Pennant* ſuſpects they may alſo reſort to *Juan Fernandez*.

The *Urſine Seal*; a name which Mr *Pennant* ſubſtitutes for that of the *Sea Bear*; leads, during the three ſummer months, a moſt indolent life. They arrive at the iſlands vaſtly fat; but during the above time they are ſcarcely ever in motion. They confine themſelves for whole weeks

weeks to one ſpot, ſleep a great part of the time; eat nothing; and except the employment the females have in ſuckling their young, they are totally inactive. They live in families; each male has from eight to fifty females, whom he guards with the jealouſy of an eaſtern monarch; and though they lie by thouſands on the ſhores, each family keeps itſelf ſeparate from the reſt; and ſometimes, with the young and unmarried ones, amount to a hundred and twenty. The old animals, which are deſtitute of females, or deſerted by them, live apart, and are exceſſively ſplenetic, peeviſh, and quarrelſome. They are exceſſively fierce; and ſo attached to their old haunts, that they would die ſooner than quit them. They are monſtrouſly fat, and have a moſt hircine ſmell. If another approaches their ſtation, they are rouſed from their indolence, and inſtantly ſnap at it, and a battle enſues; in the courſe of the conflict they perhaps intrude on the ſeat of another: this gives new cauſe of offence, ſo in the end the diſcord becomes univerſal, and is ſpread along the whole ſhore.

The other males are alſo very iraſcible: The cauſes of their diſputes are generally theſe. The firſt and the moſt terrible is, when an attempt is made by another to ſeduce one of their miſtreſſes, or a young female of the family. This inſult produces a combat; and the conqueror is immediately followed by the whole Seraglio, who are ſure to deſert the unhappy wretch who is vanquiſhed. The ſecond reaſon of a quarrel is, when one invades the ſeat of another. The third ariſes from their interfering in the diſputes of others. Theſe battles are very violent. The wounds they give and receive are very deep,

and reſemble the cuts of a ſabre. At the end of a fight they fling themſelves into the ſea, to waſh away the blood.

The males are very fond of their young, but very tyrannical towards the females: if any body attempts to take one of their cubs, the male ſtands on the defenſive, while the female makes off with the young in her mouth; ſhould ſhe drop it, he inſtantly quits the enemy, falls on her, and beats her againſt the ſtones till he leaves her for dead. As ſoon as ſhe recovers, ſhe comes in the moſt ſuppliant manner to the male, crawls to his feet, and waſhes them with her tears; he in the mean time ſtalks about in the moſt inſulting manner; but in caſe the young one is carried off, he melts into the deepeſt affliction, and ſhews every ſign of deep concern. The female brings but one at a time, never more than two.

They ſwim very ſwiftly, at the rate of ſeven miles an hour. They can continue a long time under water. They are very tenacious of life, and will live for a fortnight after receiving ſuch wounds as would immediately deſtroy any other animal. The male is vaſtly ſuperior in ſize to the female. The body of each is of a conic form, very thick before, and tapers to the tail. The length of a large male is eight feet, circumference five; near the tail twenty inches; weight 800 pounds. The noſe projects like that of a pug dog, but the head riſes ſuddenly; the noſtrils are oval, divided by a ſeptum; the lips are thick; their inſides are red and ſerrated; the whiſkers long and white. The teeth, in all thirty ſix, lock into each other when the mouth is cloſed. The tongue is bifid; the eyes are large and prominent; the iris black;

black; the pupil ſmaragdine: the eyes may be covered at pleaſure with a fleſhy membrane: the ears are ſmall, ſharp pointed; hairy without, ſmooth and poliſhed within.

The length of the fore-legs is twenty-four inches; like thoſe of other quadrupeds, not immerſed in the body like thoſe of ſeals. The feet are formed with toes, as thoſe of other animals, but are covered with a naked ſkin, having only the rudiments of nails on five latent toes. The hind-legs are twenty-two inches long, fixed to the body like thoſe of ſeals, but capable of being brought forward; ſo that the animal can uſe them to ſcratch its head. Theſe feet are divided, each into five toes, connected with a great web, a foot broad: the tail is only two inches long.

The hair is long and rough, with a ſoft down of a bay colour beneath. The hair on the neck of the old males ſtands erect The general colour of theſe animals is black; but the hair of the old ones is tipt with grey. The females are cinereous. The ſkins of the young ones cut out of their dams are very uſeful for cloathing, and coſt about 3 s. 4 d. each; the ſkin of an old one 4 s. The fat and fleſh of the old males is very nauſeous; but that of the females reſembles lamb. The young ones roaſted, are as good as ſucking pigs.

XIV.—*The Bottle-noſed Seal.*

THE ſnout of the male projects five or ſix inches below the lower jaw. The upper part conſiſts of a looſe wrinkled

led ſkin, which this animal, when angry, has the power of blowing up, ſo as to give the noſe an arched appearance. The feet are ſhort and duſky, with five toes on each furniſhed with nails. The hind-feet have the appearance of great laciniated fins. It has large eyes, great whiſkers, ſhort dun hair on the body; that on the neck is a little longer. The ſkin is very thick. An old male will meaſure twenty feet in length, and fifteen in circumference.

The female has a blunt noſe, tuberous at the top; wide noſtrils; a mouth breaking very little into the jaws: conic teeth; eyes oblique and ſmall; fore-legs twenty inches long; and toes with flat oblong nails. Its hind parts are divided into two great forked fins, without any tail: the whole body is covered with ſhort ruſt-coloured hair. The length from the noſe to the end of the fins is four yards; its greateſt circumference two and a half. They inhabit the ſeas about *New Zealand*, *Juan Fernandez*, *Falkland Iſlands*, from S. Lat. 54. deg. 40 min. The males ſhew little attachment, but the females are exceſſively fond of their young. Towards evening both male and female ſwim a little way to ſea, the laſt with its young on its back. The *French* call both this and the *Urſine* ſpecies by the common name of *ſea wolves*. One of them has been known to yield a butt of oil, and its blood to fill two hogſheads. The fleſh is eatable. *Lord Anſon*'s people eat it under the denomination of beef, to diſtinguiſh it from that of ſeal, which they called lamb.

They aſſemble in families like the former ſpecies, but not in ſuch numbers. The males ſhew equal jealouſy about

bout their miſtreſſes; and their combats are equally bloody. When at peace, to prevent ſurprize, each herd places a centinel, who gives certain ſignals at any appearance of danger. During the breeding ſeaſon they abſtain from food: and, before that is elapſed, become very lean; at other times they feed on fiſh and ſmaller ſeals.

XV.—*The Leonine Seal; the Sea Lion of Cook's Voyages;*

Has a ſhort noſe turning a little up; a great head; large eyes; long and thick whiſkers, ſtrong enough for pick-tooths. On the neck and ſhoulders of the male there is a great mane of coarſe long waving hair, not unlike the ſhaggy appearance of a lion. The reſt of the body is covered with a very ſhort, ſmooth, and gloſſy coat of a deep brown colour. Thoſe of *Kamſchatka* are reddiſh; the females tawny, The fore-feet are like thoſe of the *Urſine* ſeal, without the leaſt external appearance of toes: the hind-feet are very broad, furniſhed with very ſmall nails: the tail is very ſhort; the hind parts are vaſtly large, ſwelling out with the vaſt quantity of fat. The old males are from twelve to fourteen feet long, of great circumference about the ſhoulders: They weigh from twelve to fifteen hundred pounds. The females are from ſix to eight feet in length; more ſlender made than the males, and quite ſmooth. They are found in vaſt numbers on the coaſt of *Patagonia*. They live in families ſeparate from the *Urſine* and other ſeals. They have from

from two to thirty females a-piece. They have a fierce look; the old males ſnort and roar like enraged bulls; but on the approach of mankind fly with precipitation; the female makes a noiſe like calves; the young bleat like lambs. The leſſer ſeals, penquins, and fiſh, are the food of theſe animals; but when aſhore at breeding time, they faſt three or four months. They are ſaid at that time to ſwallow a number of large ſtones, each as big as two fiſts, in order to keep their ſtomach diſtended.

GENUS XLIII.—*The Manati.*

THIS genus has fin-like fore-legs; the hind parts ending in a tail horizontally flat. It contains only three ſpecies.

I.—*The Whale-tailed Manati.*

THIS animal, in nature ſo nearly approaches the cetaceous tribe, that had we not reſolved to adhere to the ſyſtematic writers, we might have left it and ſome others to come along with the fiſhes in a ſubſequent volume. It ſcarcely deſerves the name of a *biped*, much leſs that of a *quadruped*. What are called its fore-feet are little more than pectoral fins; they ſerve only for ſwimming, and are never uſed for walking; for it never goes aſhore like the *Walrus* and *Seal*. It brings forth in the water, and, like the whale, ſuckles its young in that element. Like the whale, it has no voice; and, like that animal, has a horizontal broad tail, without even the rudiments of hind-feet. In inhabits the ſeas about *Berring's Straits*; it is alſo found near the *Iſle of France*.

They live perpetually in the water, and frequent the edges of the ſhores. In calm weather they ſwim in great droves near the mouths of rivers. In the time of flood they come ſo near the land, that a perſon may ſtroke

them with his hand. They live in families, one near another; each conſiſts of a male, a female, a half grown young one, and a very ſmall one. The females oblige their young to ſwim before them, while the other old ones ſurround and guard them on all ſides. The affection between the male and female is very great; for if ſhe be attacked, he will defend her to the utmoſt; and, if ſhe be killed, will follow her corpſe to the very ſhore, and ſwim ſome days near the place it has been landed at. They copulate in the ſpring, in the ſame manner as the human kind. The female brings but one young one at a time, and ſuckles it by two teats. They are vaſtly voracious; when filled, they fall aſleep on their backs. During their meals, they are ſo intent on their food, *fuci* that grow in the ſea, that any one may go among them, and chooſe which he likes beſt.

Their backs and ſides are generally above water; and numbers of gulls are continually perching on them, and picking out a peculiar ſpecies of louſe, with which their ſkins are infeſted. In winter, they are ſo very lean, that you may count their ribs. When ſtruck with a harpoon, it requires the united ſtrength of thirty men to draw one of them on ſhore. When a *Manati* is ſtruck, its companions ſwim to its aſſiſtance; ſome attempt to overturn the boat, others preſs down the rope to break it, and others ſtrike at the harpoon with their tails, and often ſucceed in forcing it out.

They are of an enormous ſize; ſome are 8 feet long, and weigh 80000 pound. The head is ſmall, oblong, and almoſt ſquare; the noſtrils are filled with ſhort briſtles; the gape or *rictus* is ſmall: the lips are double:

near

near the junction of the two jaws, the mouth is full of white tubular briſtles; the lips are alſo full of briſtles, which ſerve inſtead of teeth. In the mouth there are no teeth; only two flat white bones, one in each jaw, with undulated ſurfaces, which ſerve in place of grinders. The eyes are extremely ſmall, not larger than thoſe of a ſheep; the iris is black: it has no ears, only two very ſmall orifices: its tongue is pointed and ſmall: its neck is very thick; the head hangs down. The circumference of the body near the ſhoulders is twelve feet; about the belly twenty; near the tail only four feet eight: the head thirty-one inches: the neck ſeven feet. Near the ſhoulders are two feet, or fins rather, which are only two feet two inches long, and have neither fingers nor nails; concave beneath, and covered with hard briſtles. The tail is thick, ſtrong, and horizontal, ending in a ſtiff black fin, like the ſubſtance of whale-bone.

The ſkin is very thick, black, and full of inequalities, like the bark of oak. It has no hair on it; but is ſo hard as ſcarcely to be cut with an ax. Beneath the ſkin there is a thick blubber which taſtes like oil of almonds. The fleſh is coarſer than beef, and will not ſoon putrify. The young ones taſte like veal. The ſkin is uſed for ſhoes, and for covering the ſides of boats.

The *Ruſſians* call this animal the *Sea Cow*.

II.— *The Round-tailed Manati.*

THE round-tailed *Manati* has thick lips; eyes as minute as a pea; and two very ſmall orifices for ears. Its neck is ſhort, and thicker than its head: it is thickeſt at the ſhoulders and tapers gradually to the tail, which is quite round, lies horizontally, is thickeſt in the middle, growing thinner to the edges. The feet are placed at the ſhoulders; beneath the ſkin there are bones for five complete toes: near the baſe of each foot, in the female, is a ſmall teat. The ſkin is very thick and hard, having ſome few hairs ſcattered over it. *Dampier* meaſured ſome of theſe animals in the *Weſt Indies* ten or twelve feet long; their tails twenty inches long, fourteen broad. Some of the largeſt weighed twelve hundred pounds. *Cluſius* examined one ſixteen feet and a half long, and *Gomora* ſpeaks of them of the length of twenty feet.

The *Manati*, which entirely inhabit freſh waters, according to *Dampier*, are much leſs than the others. Thoſe of the higher parts of the *Oronoque* weigh only from five hundred to ſeven hundred and fifty pounds. They inhabit the rivers of *Africa*, from *Senegal to the Cape*; and thoſe of *South America* alſo. They ſometimes live in the ſea, near the mouth of ſome great river; into which they come once or twice in twenty-four hours, for the ſake of brouzing on the marine plants which grow within their reach. They delight in brackiſh, or ſweet water, rather than in ſalt and in ſhallow water near low land, and in places ſecure from ſurges and rapid tides. It is ſaid that at

at times they frolic and leap to great heights out of the water. They are taken with a harpoon ſtuck in the end of a ſtaff, which the *Indians* uſe with great dexterity. The *Spaniards* call them *Fiſh Cows*.

The extraordinary hiſtory of a tame *Manati*, preſerved by a *Prince* of *Hiſpaniola*, in a lake adjoining to his reſidence, at the time of the arrival of the *Spaniards*, deſerves to be mentioned. It was, on account of its general nature, called in the language of the country *Matum*. It would appear as ſoon as it was called by any of its familiars; for it hated the *Spaniards* on account of an injury it had received from one of thoſe adventurers. The fable of *Arion* was here realiſed. It would offer itſelf to the *Indian* favourites, and carry over the lake ten at a time, ſinging and playing upon its back. *Matum* at laſt, however, eſcaped to his native waters by means of a violent flood.

III.— *The Sea Ape.*

THIS is another very ſingular animal, ſeen by Mr. *Steller* on the coaſt of *America*. It was five feet long, with a head like a dog's; it had erect and ſharp ears; large eyes; a ſort of beard on both lips; its body was round, thickeſt near the head, tapering to the tail, which was bifurcated; the upper lobe the longeſt: its body was covered with thick hair, grey on the back and red on the belly. Mr. *Steller* could diſcover neither feet nor paws. It was full of frolic, played a thouſand monkey tricks; ſometimes ſwimming on one ſide, ſometimes on the other ſide of

of the ſhip, looking at it ſeemingly with great amazement. It would come ſo near the ſhip, that it might be touched with a pole; but if any body ſtirred, it would immediately retire. It often raiſed one third of its body above the water, and ſtood erect for a conſiderable time: then ſuddenly darted under the ſhip, and appeared in the ſame attitude on the other ſide; and would repeat this for thirty times together. It would frequently bring up a ſea plant, not unlike the bottlegourd, which it would toſs about and catch again in its mouth, playing numberleſs fantaſtic tricks with it.

DIV. IV.—*Winged Quadrupeds.*

GENUS XLIV.—*The Bat.*

THE fore-feet of this genus have long extended toes, connected by thin broad membranes, extending to the hind-legs. The genus contains about twenty ſpecies: of theſe the firſt claſs are without tails.

I.—*The Ternate, Rouſſette, or Rougette Bat* *.

BATS of this ſpecies have large canine teeth, four cutting ones above, the ſame below; a ſharp black noſe; large naked ears; and a pointed tongue, terminated by ſharp aculeated *papillæ*. The exterior toe is detached from the membrane; the claw ſtrong and hooked. There are five toes on the hind-feet, with talons very crooked, ſtrong, and compreſſed ſideways. They have no tail; the membrane is divided behind quite to the rump. The head is of a dark ferruginous colour; the neck, ſhoulders, and under ſide, are of a much lighter and brighter red. On the

* Veſpertilio Vampyrus of the Syſt. Nat.

the back the hair is ſhorter, duſky, and ſmooth: the membranes of the wings are duſky. They vary in colour: ſome are entirely of a reddiſh brown; others duſky. Some are one foot long, and four from tip to tip of the wings expanded; but there are others vaſtly larger. This ſpecies is not gregarious, though numbers of them at times meet accidentally on the ſame tree in queſt of food; and being frightened, may chance to fly the ſame way in a flock.

The *Rougette* differs from the *Rouſſette*, only in that its whole body and head are cinereous, mixed with ſome black; and that on the neck there is a great bed of orange or red. The ſize is alſo much leſs; the extent of the wings being little more than two feet. They inhabit the ſame countries, agree in food, but differ in manners. They are found in *Guinea*, *Madagaſcar*, and all the other iſlands in the *Indian Ocean*, *New Holland*, *the Friendly Iſlands*, *the New Hebrides*, *and New Caledonia*. The *Rougettes* fly in flocks, and perfectly obſcure the air with their numbers. They begin their flight from one neighbouring iſland to another immediately on ſun-ſet, and return in clouds from the time it is light till ſun riſe. They lodge during the day in hollow trees. Both kinds live on fruits, and are fond of the juice of the palm-tree, with which they will intoxicate themſelves till they drop on the ground. They ſwarm like bees, hanging near one another from the trees in great cluſters. In *New Caledonia* the natives uſe their hair in ropes, &c. They grow exceſſively fat at certain times of the year. The *Indians* eat them, and declare the fleſh to be very good. The *French* in the *Iſle de Bourbon* boil them in their *bouillon*,

to give it a reliſh. The negroes have them in abhorrence. Their bodies are from the ſize of a pullet to that of a dove. While eating, they make a great noiſe: their ſmell is rank: they are fierce, bite, and make great reſiſtance when taken. They bring out one young one at a time. The ancients had ſome knowledge of theſe animals. *Herodotus* mentions winged wild-beaſts like bats, that moleſted the *Arabs* who gathered the *Caſſia*, to ſuch a degree, that they were obliged to cover themſelves all but the eyes with ſkins. From ſuch relations, it is probable, the poets formed their fictions of *Harpies*.

Both the greater and leſſer ſpecies are equally fond of human blood. Perſons attacked by them are in danger of paſſing from a ſound ſleep into eternity. The bat is ſo dextrous a bleeder, as to inſinuate its aculeated tongue into a vein without being perceived; it then ſucks the blood till it is ſatiated, all the while fanning with its wings, and agitating the air, in thoſe hot climates, in ſo pleaſing a manner, as to caſt the ſufferer into a ſtill ſounder ſleep. It is therefore very unſafe to ſleep in the open air, or to leave open any entrance to ſuch dangerous animals. Nor do they confine themſelves to human blood: in certain parts of *America*, they even deſtroy cattle.

There is a leſſer variety, with a head like a greyhound; large teeth; and long broad naked ears. The whole body is covered with ſoft ſhort hair of a ſtraw colour. It is near nine inches long: the extent of its wings two feet two inches.

II.— *The Spectre*

INHABITS *South America*; like the former it lives in the palm-trees, and grows very fat: it has a long nose; large teeth; long, broad, upright ears; a conic erect membrane at the end of the nose, bending at the end and flexible. The hair on its body is cinereous, and partly long; the wings are full of ramified fibres: the membrane extends from hind-leg to hind-leg. From the rump extend three tendons, which terminate at the end of the membrane. It is seven inches and a half long; extent, two feet two.

III.— *The Javelin Bat*

HAS large pointed ears; an erect membrane at the end of the nose, in form of the head of an ancient javelin. It inhabits the warm parts of *America*; is of the size of the common bat, and its fur is cinereous.

IV.—*The Leap Bat*

HAS small rounded ears; a membrane on the nose, of the form of an ovated leaf; and a web between the hind legs. It is of the same size as the last. Its fur is of a mouse colour, tinged with red. It inhabits *Jamaica*, *Surinam*,

Surinam, and *Senegal*. In the firſt, it lives in woods and caves, which are found full of its dung, productive of ſaltpetre. It feeds on the prickly pear.

V.—*The Cordated Bat*

HAS very broad and long ears; a heart-ſhaped membrane at the end of its noſe, and a web between the hind legs. The colour of its face is a very light red: that of the body ſtill paler. It inhabits *Ceylon*, and the *Iſle* of *Ternati*, one of the *Moluccas*.

The Second Claſs, with Tails.

VI.—*The Peruvian Bat.*

THIS ſpecies has a head like a pug-dog; large ſtraight pointed ears; two canine teeth, and two ſmall cutting teeth between them, in each jaw. The tail is incloſed in the membrane that joins the hind-legs; and ſupported by two ligaments alſo involved in the membrane. The colour of its fur is of an iron grey; its body is equal to that of a middle-ſized rat: the extent of its wings two feet five inches.

There is a variety of this ſpecies with hanging lips like the chops of a maſtiff: its noſe and upper lip are di-

vided: it has long, narrow, ſharp-pointed ears. A few joints of its ſhort tail ſtick out without the membrane, which at ſame time extends far beyond it, is angular, and ends in a point. The claws on the hind-feet are large, hooked, and compreſſed ſideways. The membranes of the wings are duſky, and very thin. The fur on the head and back is brown; on the belly cinereous: five inches long: extent of the wings, twenty. It inhabits *Peru* and the *Muſquito ſhore*.

VII.—*The Bull-dog Bat*,

With broad round ears, touching each other in front; has a thick noſe and pendulous lips; the upper part of the body is of a deep aſh colour, the lower paler; the tail is long; its five laſt joints are diſengaged from the membrane: it is two inches long; its extent is nine and a half. It inhabits the *Weſt Indies*.

VIII.—*The Senegal Bat*

Has a long head; its noſe a little pointed: ſhort and pointed ears; fur of a tawny brown, mixed with aſh colour; belly paler; two joints of the tail free. It is four inches long; its extent twenty one.

IX.—*The Pouch Bat,*

Of a brown colour, an inch and a half long; inhabits *Surinam*; and has a ſmall purſe or pouch near the ſecond joint of each wing.

X.—*The Bearded Bat,*

Is alſo a ſmall ſpecies: its noſtrils are open a great way up: it has very long hair on its forehead and under its chin: its fur is of a reddiſh brown above; on its under ſide of a dirty white tinged with yellow.

XI.—*The New York Bat*

Has a head ſhaped like that of a mouſe, only the top of the noſe is a little bifid; two canine teeth in each jaw; a very long tail incloſed in the membrane, the upper ſide of which membrane is covered with very long ſoft hair, of a bright tawny colour: the belly is paler. At the baſe of each wing there is a white ſpot, The wings are thin, naked, and duſky. The bones of the hind-legs are very ſlender. Its length is ten inches and a half; its tail near two; the extent of its wings is equal to the length of its body.

It inhabits *North America*, and is alſo found in *New Zealand*.

XII.—*The Striped Bat*

Inhabits *Ceylon*. It has a ſmall ſhort noſe; ſhort broad ears pointing forward; wings ſtriped with black, ſometimes with tawny brown, and is two inches long. Its colour varies; the upper parts are ſometimes of a clear reddiſh brown; the lower whitiſh.

XIII.—*The Molucca Bat*,

First deſcribed by that able naturaliſt Dr. *Pallas*, has a large head; ſmall ears; a thick noſe; noſtrils terminating outwards in form of a ſcrew: its tongue is covered with *papillæ* and minute ſpines: its claw or thumb is joined to the wing by a membrane. The firſt ray of the wing is terminated by a claw. The end of the tail reaches beyond the membrane: its upper parts are greyiſh, or of a ſtraw colour; the belly of a dull white: three inches and three quarters long: the extent of its wings about fifteen.

XIV.—*The Horſe Shoe Bat*

Has its name from the membrane at the end of its noſe: its ears are large; broad at their baſe, and ſharp-pointed, inclining backward: it is cinereous above, whitiſh

tiſh beneath: three inches and a half long; its extent above fourteen.

There is a leſs variety of this ſpecies; it is found about the *Caſpian*: inhabits *Burgundy*; and has been diſcovered in *Kent*.

XV.—*The Noctule*

Has its noſe ſlightly bilobated; ears ſmall and rounded; a ſmall wart on the chin, and hair of a reddiſh aſh colour. Its length is two inches and eight tenths; the extent of its wings is thirteen inches. It inhabits *Great Britain* and *France*; and is very common in *Ruſſia*; it flies high in ſearch of food. There were taken under the eaves of *Queen's College*, *Cambridge*, in one night, one hundred and eighty-five; the ſecond night, ſixty three; the third night, two. Each that was meaſured had fifteen inches extent of wings.

XVI.—*The Serotine*

Has a longiſh noſe; ears ſhort, but broad at the baſe; and brown hair on the upper part of the body; the belly of a paler colour: it is two inches and a half long; inhabits *France*; and is alſo found beyond lake *Baikal*: but has not as yet been diſcovered in any other part of the vaſt dominions of *Ruſſia*.

XVII.—*The Pepiſtrelle*

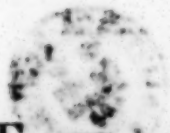
Has a ſmall noſe: its upper lip ſwells out a little on each ſide: its ears are broad. Its fore-head is covered with long hair: its lips are yellow: its upper parts a yellowiſh brown; the lower duſky. This is the leaſt of bats, not an inch and a quarter long; the extent of its wings only ſix and a half. It inhabits *France*, and is common about the rocky and mountainous parts of *Siberia*.

XVIII.—*The Barbaſtelle*

Has a ſunk forehead, and long broad ears, touching each other at their baſe: theſe conceal the face and head when looked at in front. The noſe is ſhort and flatted at the end: the cheeks are full; the upper part of the body of a duſky brown; the lower aſh coloured and brown. It is two inches long; its extent ten and a half. It inhabits *France*.

XIX.—*The Common Bat,*

THE *Veſpertilio Murinus* of *Linnæus*, has ſhort ears, and mouſe coloured fur, tinged with red. It is two inches and a half long: the extent of its wings meaſures nine inches. It inhabits *Europe*, and is common in *Britain*.



XX.—*The Long-eared Bat.*

THE ears of this ſpecies are above an inch long, thin, and almoſt pellucid. Its body and tail both meaſure only one inch and three quarters. This and all other bats except the *Ternati* and the *Horſe-ſhoe*, have a leſſer or internal ear, ſerving as a valve to cloſe the greater when the animal is aſleep. It inhabits *Europe*, and is found in *Great Britain*.

Bats appear abroad in this country early in the ſpring. They are ſometimes tempted by a good day to ſally forth even in winter. They fly in the evenings; live on moths, and other nocturnal inſects; ſkim along the water in queſt of gnats; fly by jerks, not with the regular motion of birds; frequent glades and ſhady places; will go into larders, and gnaw any meat they find. They bring two young at a time, which they ſuckle at their breaſt. They

retire at the end of ſummer into caves, the eaves of houſes, and into ruined buildings, in vaſt multitudes, where they generally remain torpid, ſuſpended by the hind-legs, wrapped up in their wings. They are the prey of owls, and have but a weak voice. *Ovid*, in the following lines, takes notice both of the weakneſs of their voice, and the origin of their *Latin* name:

Minimam pro corpore vocem
Emittunt; peraguntque leves ſtridore querelas.
Tectaque, non ſylvas celebrant: lucemque peroſæ
Nocte volant: ſeroque trahunt a veſpere nomen.



THE END OF THE FIRST VOLUME.

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